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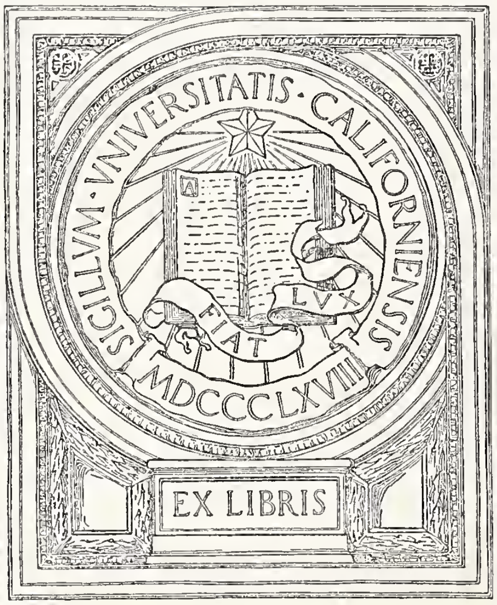

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Increased incidence of staphylococcal infections has been reported for Europe, Britain, Australia, New Zealand, and the Americas.[1-5] World-wide reports indicate that many strains responsible for these infections are resistant to commonly used antibiotics.[1-3,5-14] However, this ubiquitous pathogen, according to studies from Germany,[8] Canada,[9] Uganda,[10] New Zealand,[11] England,[12] and the United States,[13,14] remains sensitive to CHLOROMYCETIN.

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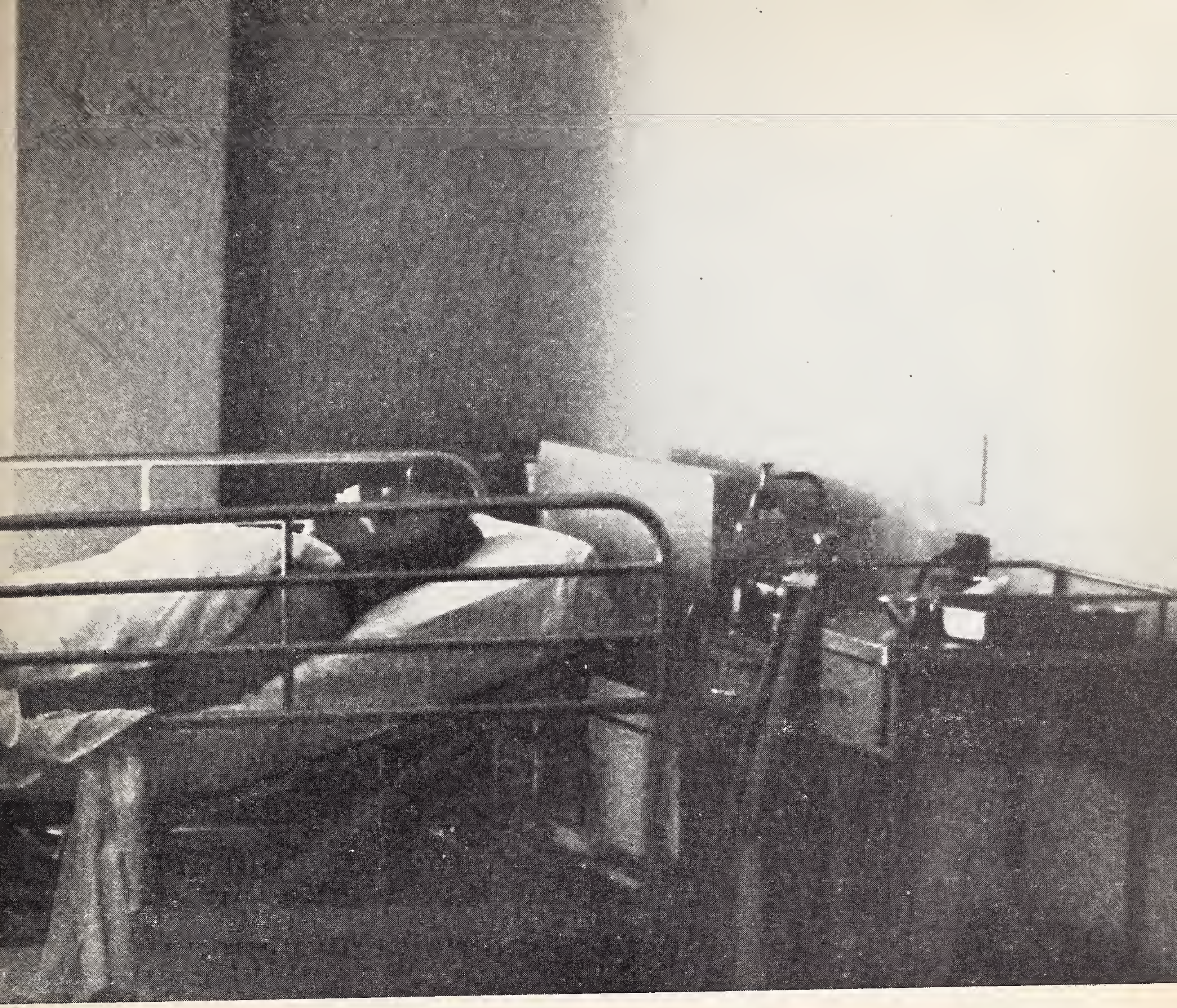

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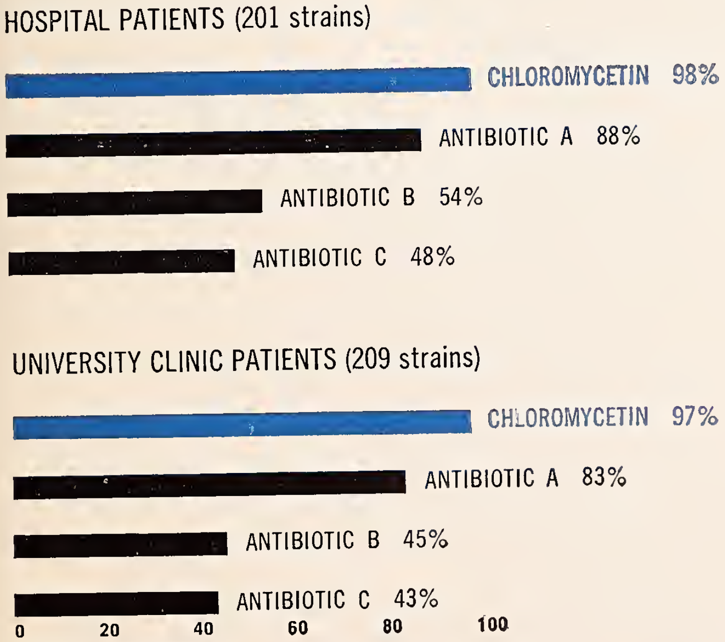

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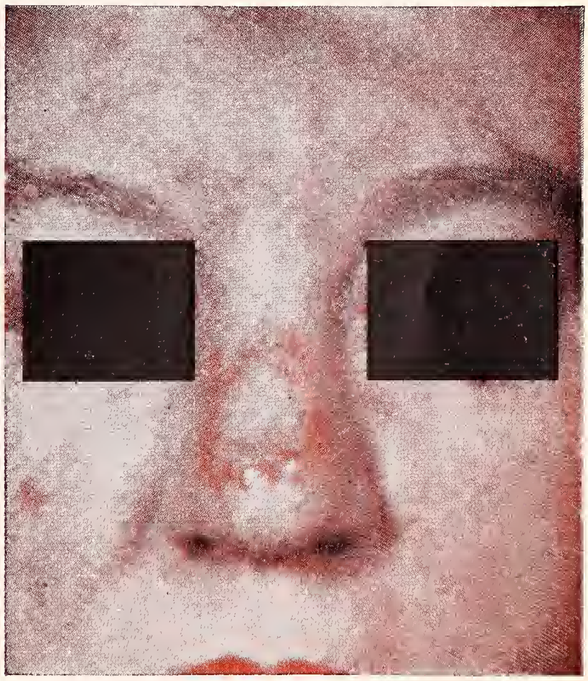

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Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3. 1879.

(The Editors of the Journal assume no responsibility for opinions expressed in the articles contributed by individual members.)

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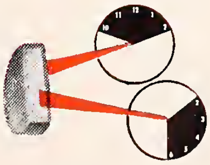

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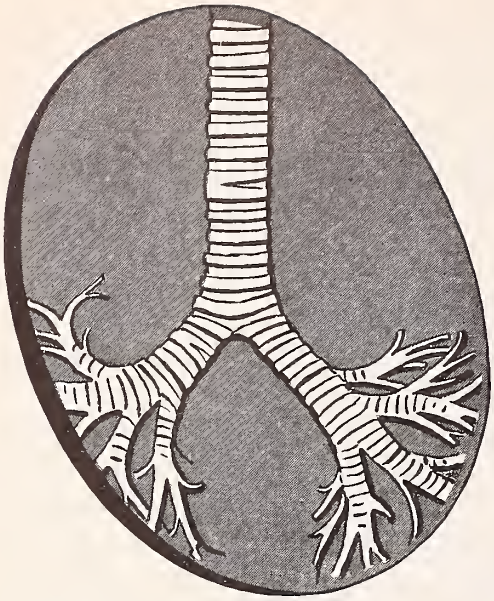

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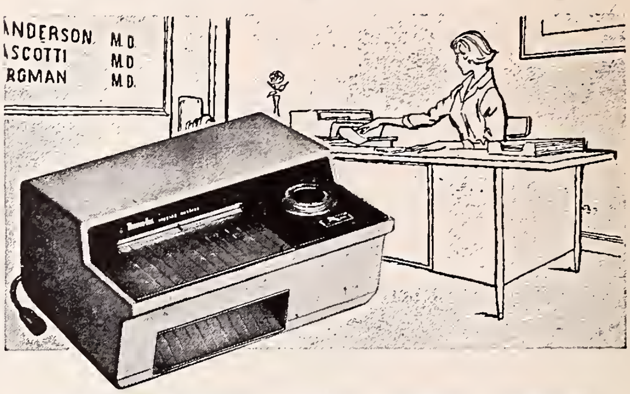
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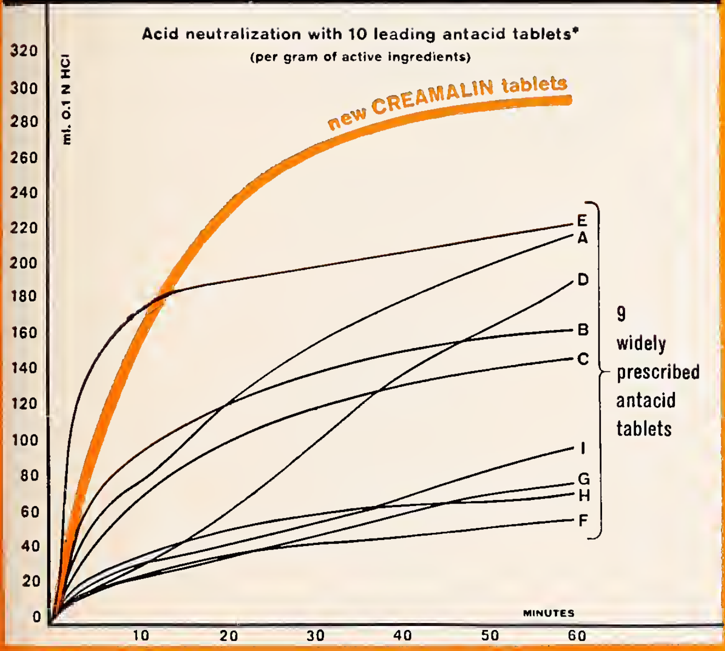

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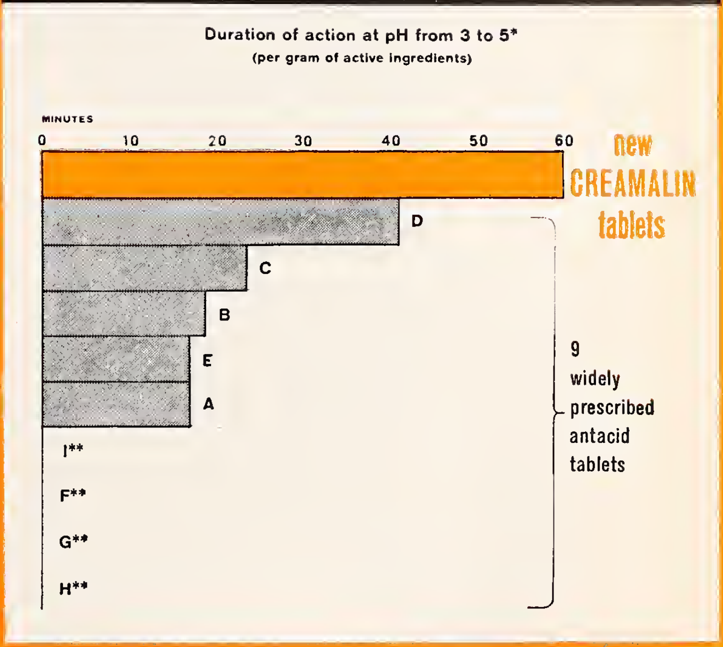

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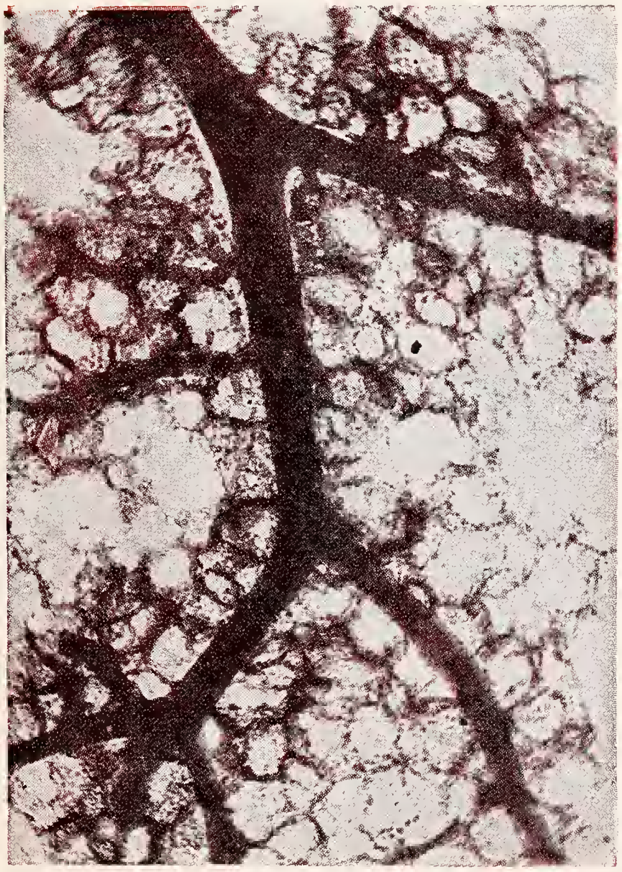

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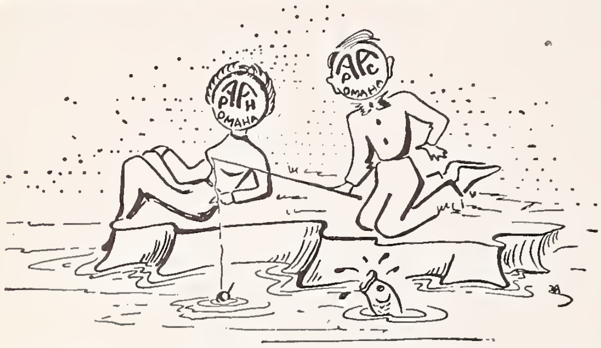
*Rest, Edward J., and Todd, Wilbert R., Textbook of Biochemistry, 2nd Ed. (New York, Macmillan, 1955), p. 522; p. 1074-5.



Protection Against Loss Of Income From Accident & Sickness As Well As Hospital Expense Benefits For You And All Your Eligible Dependents.

ALL PREMIUMS COME FROM PHYSICIANS SURGEONS DENTISTS ALL BENEFITS GO TO

PHYSICIANS CASUALTY & HEALTH ASSOCIATIONS
OMAHA 31, NEBRASKA
Since 1902

Handsome Professional Appointment Book
sent to you FREE upon request.

P. A. F. CASE pH4

℞ *(Fortified Triple Strength)*

Improved Douche Powder

G-11® (Hexachlorophene USP), deodorant

FORTIFIED — with Sodium Lauryl Sulfate and Alkyl Aryl Sulfonate.

DETERGENT — High surface activity in acid and alkaline media.

LOW SURFACE TENSION — Increases penetration into vaginal rugae and dissolution of organisms such as Trichomonas and fungus.

HIGH SURFACE ACTIVITY — Liquifies viscus mucus on vaginal mucosa releasing accumulated debris in the vaginal tract.

Buffered to control a normal vaginal pH.

ETHICALLY PKGED, net wt. ....10 oz.

Mfg. by G. M. CASE LABORATORIES
San Diego 16, Calif.

HOBBY HORSE RANCH SCHOOL

A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

P.O.B. 44, Cortaro, Ariz.

ALCOHOLISM

A hospital equipped and staffed for the accommodation of those patients in whom over indulgence in alcoholic beverages has created a problem.

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POLLEN FREE REFRIGERATED AIR
CONDITIONING FOR YEAR ROUND COMFORT

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Of course, women like "Premarin"®

THERAPY for the menopause syndrome should relieve not only the psychic instability attendant the condition, but the vasomotor instability of estrogen decline as well. Though they would have a hard time explaining it in such medical terms, this is the reason women like "Premarin."

The patient isn't alone in her devotion to this natural estrogen. Doctors, husbands, and family all like what it does for the patient, the wife, and the homemaker.

When, because of the menopause, the psyche needs nursing—"Premarin" nurses. When hot flushes need suppressing, "Premarin" suppresses. In short, when you want to treat the whole menopause, (and how else is it to be treated?), let your choice be "Premarin," a complete natural estrogen complex.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

Ayerst Laboratories • New York
16, N. Y. • Montreal, Canada

5854

For every topical indication, a Burroughs Wellcome 'SPORIN'...

'CORTISPORIN'®
brand **OINTMENT**

Combines the anti-inflammatory effect of hydrocortisone with the comprehensive bactericidal action of the antibiotics.

Ointment: Tubes of ⅛ oz. and ½ oz. (with applicator tip) for ophthalmic or dermatologic application.
Otic Drops: Bottles of 5 cc. with sterile dropper.

Provides comprehensive bactericidal action effective against virtually all bacteria likely to be found topically.

'NEOSPORIN'®
brand **ANTIBIOTIC OINTMENT**

Ointment: Tubes of ½ and 1 oz. and tubes of ⅛ oz. with ophthalmic tip.
Ophthalmic Solution: Bottles of 10 cc. with sterile dropper.
NEW { **Lotion:** Plastic squeeze bottles of 20 cc.
Powder: Shaker-top bottles of 10 Gm.

'POLYSPORIN'®
brand **ANTIBIOTIC OINTMENT**

Offers combined antibiotic action for treating conditions due to susceptible organisms amenable to local medication.

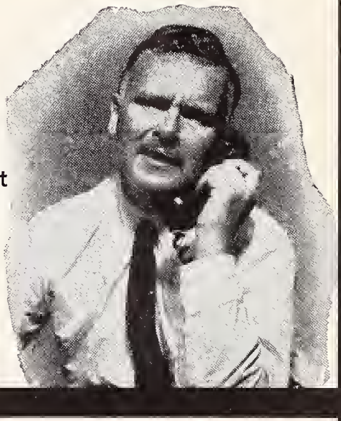
Ointment: Tubes of ½ oz., 1 oz. and ⅛ oz. (ophthalmic tip).

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.

REACHING FOR THOSE 9B's NEARLY PUT ME ON THE SHELF...

Reaching for 9B shoes and other top shelf sizes is no joke . . . it gave me a terrible kink in my back.

Before the day was over, I could hardly stoop to push a shoehorn.



I called my doctor that night and picked up the tablets he prescribed.

Percodan®-Demi & Percodan® *Tablets*

Salts of Dihydrohydroxycodeinone and Homatropine, plus APC

FOR PAIN

ACTS FASTER — usually within 5-15 minutes. **LASTS LONGER** — usually 6 hours or more. **MORE THOROUGH RELIEF** — permits uninterrupted sleep through the night. **RARELY CONSTIPATES** — excellent for chronic or bedridden patients. **VERSATILE** — new "demi" strength permits dosage flexibility to meet each patient's specific needs. PERCODAN-DEMI provides the PERCODAN formula with one-half the amount of salts of dihydrohydroxycodeinone and homatropine.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Federal law permits oral prescription.

Each PERCODAN* Tablet contains 4.50 mg. dihydrohydroxycodeinone hydrochloride, 0.38 mg. dihydrohydroxycodeinone terephthalate, 0.38 mg. homatropine terephthalate, 224 mg. acetylsalicylic acid, 160 mg. phenacetin, and 32 mg. caffeine.

The pain went away fast—in just 15 minutes—and I was back on the job the next morning! But not one 9B customer came in the whole day!

AND THE PAIN WENT AWAY FAST

Endo®

Literature? Write
ENDO LABORATORIES
Richmond Hill 18, New York

*U.S. Pat. 2,628,185

For those patients who complain

carries your patients through the middle of the night

outer layer
disintegrates rapidly to induce relaxation and sleep
inner core
sleep continues smoothly as inner core dissolves

Each Nebralin timed-release tablet contains:

Dorsital* .... 90 mg.
Warning: May be habit forming

Mephenesin ....425 mg.
*Dorsey brand of pentobarbital

CAUTION: Federal law prohibits dispensing without prescription

Dosage: One or two tablets ½ hour before retiring.

about waking up at 2 A.M.

nebralin®
timed-release tablet

timed-release action for a full night's sleep

NEBRALIN is designed to duplicate the normal sleep pattern. It encourages muscular relaxation and induces sustained, relaxed sleep by the release of Dorsital and mephenesin in a timed-release tablet. Rapid-acting mephenesin quickly relaxes skeletal muscles to overcome "fatigue-tension" and conditions the body for sleep. Dorsital provides CNS sedation to induce sound, relaxed sleep. The initial and sustaining dosages are designed to keep the amount of barbiturate to be inactivated at any one time at a low level tapering toward morning. Evidence indicates that mephenesin is capable of producing sleep,[1] and when combined with a barbiturate enhances barbiturate action.[2,3] Moreover, the integrated action of the two components permits smaller dosages of each,[4] assuring your patients refreshed awakenings without "morning hangover."

1 Schlesinger, E. B.: Tr. New York Acad. Sc. 2:6, (Nov.) 1948.
2 Richards, R. K., and Taylor, J. D.: Anesthesiology 17:414, 1956.
3 Shideman, F. E.: Postgrad. Med. 24:207, 1958.
4 Berger, F.: Pharmacol. Rev. 1:243, 1949.

SMITH-DORSEY · a division of The Wander Company · Lincoln, Nebraska · Peterborough, Canada

when it's skin deep

use XYLOCAINE *ointment*

. . . in nearly all external symptoms of *pain, itching* and *burning,* e.g., sunburn, minor burns, insect bites, abrasions, poison ivy and other contact dermatitis, hemorrhoids and inoperable anorectal conditions, and cracked nipples.

Xylocaine Ointment, a surface or topical anesthetic, gives fast, effective and long lasting relief. Its *water-soluble, nonstaining* base melts on contact with the skin, to assure immediate release of the anesthetic for fast action and it does not interfere with the healing processes.

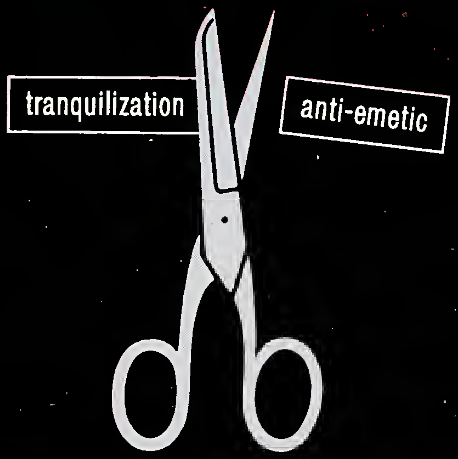
ASTRA PHARMACEUTICAL PRODUCTS, INC., WORCESTER 6, MASS., U.S.A.

XYLOCAINE® OINTMENT
(brand of lidocaine*)
2.5% & 5%
SURFACE ANESTHETIC

SEE PDR

*U.S. Pat. No. 2,441,498 Made in U.S.A.

now potent tranquilizer therapy is safer than ever



Virtual freedom of Mellaril from major toxic effects is due to greater specificity of tranquilizing action—divorced from such "diffuse" effects as anti-emetic action.

MELLARIL is virtually free of such toxic effects as
- jaundice
- Parkinsonism
- blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. . . . This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner"

SANDOZ

Mellaril®
THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels

remarkable lack of side effects

In more than 3,000 carefully-followed patients, Mellaril has been almost completely free of such major side effects as jaundice, extrapyramidal symptoms, Parkinsonism, blood dyscrasia, dermatitis even when given in quantities far in excess of the usual dosage.

"POVERTY" OF SIDE EFFECTS

"The most striking aspect of thioridazine [Mellaril] therapy is the poverty of side effects.... In its lack of side effects and low toxicity, it is superior to all other tranquilizing drugs tested. For this reason also it is well tolerated by patients, particularly those who are not hospitalized and who frequently discontinue their medication because of dizziness, sleepiness, increased tension or parkinsonism with other drugs."[2]

NEGLIGIBLE SIDE EFFECTS

"Side effects were negligible at all dosage levels: no incidence of parkinsonism or other extrapyramidal symptoms. Minimal sedation, on the whole lower than with other tranquilizing agents. No alteration in liver function, urine or blood. No photosensitivity. Patient acceptability was exceptional: lack of drowsiness, lethargy or 'washed out' feeling, permitted patients to carry on normal everyday activities. Orthostatic hypotension was absent. The initial 'keyed up' tense feeling common to other drugs of this type was absent.... Patients forced to interrupt treatment with other phenothiazine derivatives because of parkinsonism or other extrapyramidal symptoms were able to continue therapy with thioridazine without appearance of parkinsonism."[3]

SINGULARLY FREE OF SIDE EFFECTS

"The extrapyramidal syndrome was not encountered in any of its forms. Dizziness and sleepiness responded to a reduction in dosage. Other side effects did not occur.... It is singularly free from the side effects ordinarily seen with these [phenothiazine] compounds."[4]

ABSENCE OF SIGNIFICANT SIDE EFFECTS

"None of the following toxic effects, so common after administration of the phenothiazines, was present during the period of Thioridazine administration: Parkinsonism or Parkinson-like symptoms, photosensitivity, orthostatic hypotension, bone-marrow depression."[1]

MINIMAL SIDE EFFECTS

"Side effects such as extrapyramidal activity, jaundice and photosensitivity have not been observed in patients treated with Thioridazine [Mellaril]. Extrapyramidal side effects produced by other phenothiazines have disappeared promptly with no deterioration in the behavioral response when these patients have been shifted to Thioridazine."[5]

NO JAUNDICE

"No allergic reactions were observed such as skin eruptions, jaundice or agranulocytosis. Central nervous system toxicity, as manifested by extrapyramidal effects, seizures, and excitement did not occur despite the use of high doses (up to 2000 mg.) of the drug."[6]

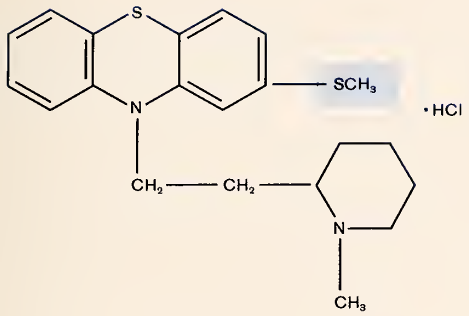
Mellaril®

THIORIDAZINE HCl

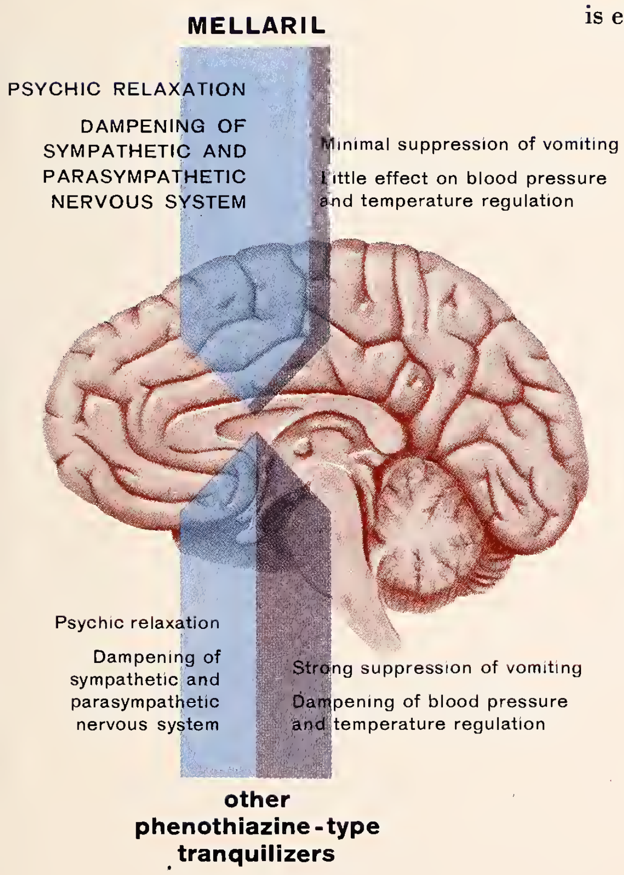
specific, effective tranquilizer • safer at all dosage levels

tranquilization | anti-emetic

a new advance in tranquilization:
greater specificity of tranquilizing action plus fewer side effects



Of 109 phenothiazines synthesized by Sandoz, Mellaril was selected as the most promising on the basis of extensive evaluation. The presence of a thiomethyl radical ($S{\cdot}CH_3$) in the position conventionally occupied by a halogen in other phenothiazines is unique and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
PSYCHIC RELAXATION
DAMPENING OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM
Minimal suppression of vomiting
Little effect on blood pressure and temperature regulation
Psychic relaxation
Dampening of sympathetic and parasympathetic nervous system
Strong suppression of vomiting
Dampening of blood pressure and temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy, while achieving psychomotor control in mental and emotional disorders.

5 Virtual freedom from toxic effects — jaundice, photosensitivity, skin eruptions, disturbed body temperature regulation, blood forming disorders have been absent in reports currently available.

These properties add up to a greater margin of safety in general office practice, in ambulatory psychiatric out-patient clinics, and in hospitalized patients.

Mellaril®
THIORIDAZINE HCl
specific effective tranquilizer • safer at all dosage levels
tranquilization
anti-emetic

a guide to administration and dosage

Dosage ranges from 10 mg. three or four times a day in milder situations to 25 mg. three or four times a day for more disturbed patients. In ambulatory psychiatric out-patients, dosages of 50 to 100 mg. three or four times a day have been found adequate. For severely disturbed hospitalized psychotics, dosages of 200 to 300 mg. three times a day may be administered.

Dosage must be individualized according to the condition and degree of response. In all cases, the smallest effective dosage should be determined for each patient.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
	ADULTS	
Mental and Emotional Disturbances:		
MILD—where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE—where agitation exists in psychoneurosis, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE—in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
	CHILDREN	
BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

PRECAUTIONS: Although possessing a unique structure and a selectivity of action which broadens its therapeutic ratio, the physician should be alert to the possibility of untoward reactions in certain susceptible individuals. In particular, he should watch for potential hemopoiet depression, jaundice or orthostatic hypotension. As wi other phenothiazines, Mellaril is contraindicated severely depressed or comatose states from any cause.

SUPPLIED: MELLARIL Tablets, 10 mg., 25 mg., 100 mg. Bottles of 100.

1. Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959. 2. Kinross-Wright, V. J.: Lecture, Clinic Meeting, American Medical Association, Minneapolis, Dec. 4, 1958. 3. Kinross-Wright, V. J.: Scientific Exhibit, Clinical Meeting, American Medical Asso ation, Minneapolis, Dec. 2-5, 1958. 4. Cohen, S.: TP-21, a new phenothiazine, Am. J. Psychiat. *115*:358, Oct. 1958. 5. Glueck, B.: Scientific Exhibit, Americ Psychiatric Association, Philadelphia, April 27-May 1, 1959. 6. Hollister, L. E., and Macdonald, B. F.: Presented at California Medical Association; Section Psychiatry, San Francisco, Feb. 25, 1959. 7. Remy, M.: Schweiz. med. Wchnschr. *88*:1221, Nov. 29, 1958. 8. Freed, S. C., in discussion on Thioridazine (Mellari in Psychiatric Patients, Hollister, L. E., and Macdonald, B. F., presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 195

- controls neurotic and psychotic patients with anxiety, apprehension, nervous tension
- virtual absence of jaundice, parkinsonism, photosensitivity, dermatitis
- minimal sedation and drowsiness
- does not mask organic conditions such as brain tumors, intestinal obstruction, etc., because of lack of anti-emetic action
- increased specificity of action results in greater safety at all dosage levels

SANDO

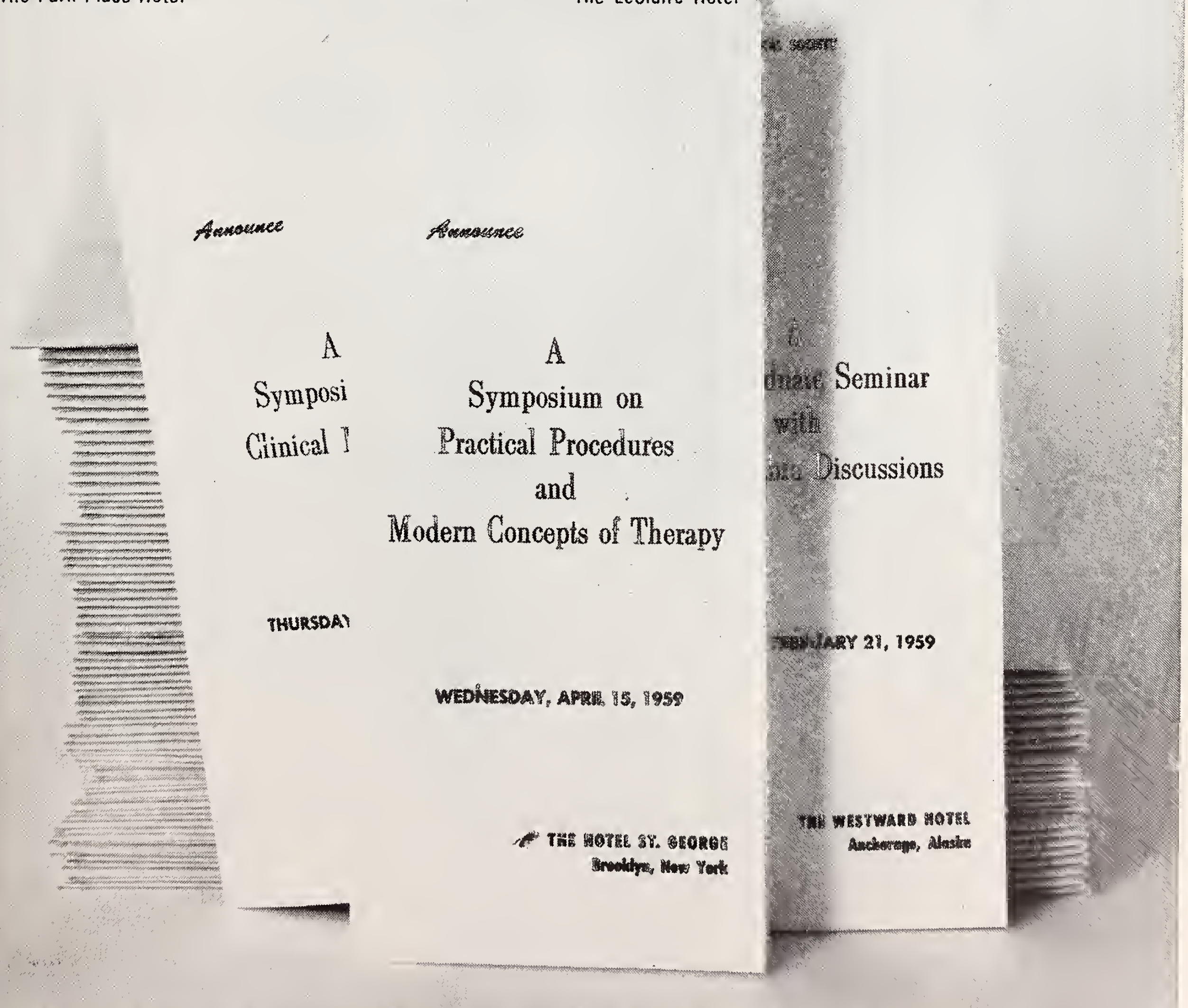
Mellaril®
THIORIDAZINE HCl
specific, effective tranquilizer • safer at all dosage levels
tranquilization
anti-emetic

all physicians are invited to attend...

In recognition of the responsibility of the pharmaceutical industry to aid postgraduate medical education, Lederle originated its Symposium Program eight years ago. Initiated with a meeting sponsored by the Knoxville Academy of Medicine and continued with other medical organizations, the program presents up-to-date information of clinical significance to physicians throughout the United States and Canada. Through Symposia, over 50,000 physicians have had the opportunity to hear and question specialists in every field and, with their wives, participate in the activities of a Symposium day.

You and your wife may wish to attend one of the Symposia below.

JEKYLL ISLAND, GEORGIA—Thursday, August 27, 1959
The Jekyll Club
BATON ROUGE, LOUISIANA—Friday, Sept. 18, 1959
The Capitol House Hotel
BEAUMONT, TEXAS—Saturday, September 19, 1959
The Hotel Beaumont
KANSAS CITY, KANSAS—Friday, September 25, 1959
Battenfeld Memorial Auditorium
INDIANAPOLIS, INDIANA—Wednesday, Sept. 30, 1959
The Sheraton-Lincoln Hotel
OKLAHOMA CITY, OKLAHOMA—Friday, October 2, 1959
The Skirvin Hotel
BIRMINGHAM, ALABAMA—Sunday, October 11, 1959
The Dinkler-Tutwiler Hotel
TACOMA, WASHINGTON—Wednesday, October 14, 1959
The Hotel Winthrop
TRAVERSE CITY, MICHIGAN—Friday, October 23, 1959
The Park Place Hotel
LUBBOCK, TEXAS—Saturday, October 31, 1959
The Lubbock Country Club
ST. CHARLES, ILLINOIS—Wednesday, November 4, 1959
The St. Charles Country Club
DALLAS, TEXAS—Friday, November 6, 1959
The Hilton Hotel
WICHITA, KANSAS—Saturday, November 7, 1959
The Hotel Broadview
SCHENECTADY, NEW YORK—Thursday, November 12, 1959
The Mohawk Golf Club
CORPUS CHRISTI, TEXAS—Friday, November 13, 1959
The Robert Driscoll Hotel
RIVERSIDE, CALIFORNIA—Sunday, November 15, 1959
The Mission Inn
SANTA BARBARA, CALIFORNIA—Wednesday, Nov. 18, 1959
The Santa Barbara Biltmore
MOLINE, ILLINOIS—Wednesday, December 2, 1959
The LeClaire Hotel



Lederle **LEDERLE LABORATORIES**, a Division of **AMERICAN CYANAMID COMPANY**, Pearl River, N. Y.

BONADOXIN®

(tables and drops)

STOPS
STOPS
STOPS
MORNING
SICKNESS

BONADOXIN Tablets relieve nausea and vomiting of pregnancy in 9 out of 10,[1-7] often within a few hours.

Moreover, a controlled study of 620 cases reported that with BONADOXIN "toxicity and intolerance [are] zero."[1] BONADOXIN is rarely soporific. It is free from the risks associated with overpotent tranquilizer-antinauseants.

NOTE: BONADOXIN has also been shown highly effective in relieving nausea and vomiting associated with: anesthesia, radiation sickness, Meniere's syndrome, labyrinthitis, cerebral arteriosclerosis, and motion sickness.

Each tiny pink-and-blue BONADOXIN tablet contains:

Meclizine HCl (25 mg.) . . . for antivertiginous, antinauseant effects.

Pyridoxine HCl (50 mg.) . . . for specific metabolic replacement.

DOSAGE: usually one tablet at bedtime. Severe cases may require another dose on arising.

SUPPLIED: tiny pink-and-blue tablets, bottles of 25 and 100. Fruit-flavored, clear green syrup in 30 cc. dropper bottles.

Infant colic? BONADOXIN DROPS are antispasmodic...stop colic in 84%,[8-10] without the risk of belladonna and barbiturates.

Each cc. contains:
Meclizine dihydrochloride .. 8.33 mg.
Pyridoxine hydrochloride ...16.67 mg.

Dosage:

under 6 months	0.5 cc.	2 or 3 times daily, on the tongue, in fruit juice or water
6 months to 2 years	1.5 to 2 cc.	
2 to 6 years . .	3 cc.	
adults and children over 6	1 tsp. (5 cc.)	

References: 1. Goldsmith, J. W.: Minnesota Med. 40:99 (Feb.) 1957. 2. Groskloss, H. H., et al.: Clin. Med. 2:885 (Sept.) 1955. 3. Weinberg, A., and Werner, W. E. F.: Am. Pract. & Digest Treat. 6:580 (April) 1955. 4. Crawley, C. R.: West. J. Surg. 8:463 (Aug.) 1956. 5. Tartikoff, G.: Clin. Med. 3:223 (March) 1955. 6. Dunn, R. D., and Fox, L. P.: Clinical exhibit. 7. Codling, J. W., and Lowden, R. J.: Northwest Med. 57:331 (March) 1958. 8. Dougan, H. T.: Personal communication. 9. Leonard, C. L.: Personal communication. 10. Steinberg, C. L.: Personal communication.

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being

Remarkable relief from

LOW BACK PAIN

and

DYSMENORRHEA

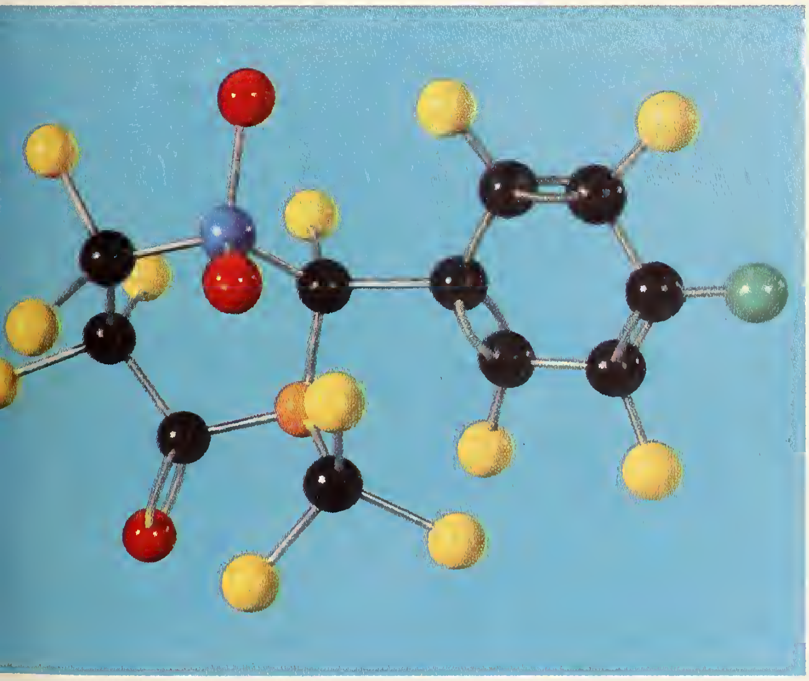
Trancopal®

*the first true tranquilaxant**

Potent MUSCLE RELAXANT

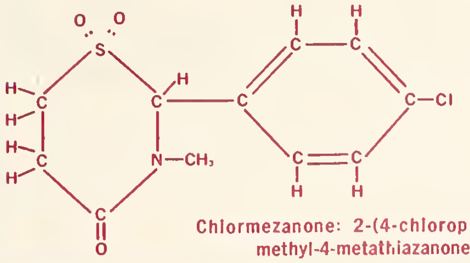
...Equally effective as a TRANQUILIZER

* **tran-qui-lax-ant** (tran′kwi-lak′sant) [< L. tranquillus, quiet; L. laxare, to loosen, as the muscles]



Trancopal, a major development of Winthrop research, is a new, orally administered non-hypnotic central relaxant and tranquilizer. It relieves muscle spasm in a variety of musculoskeletal and neurologic conditions and also exerts a marked tranquilizing effect in anxiety and tension states.

Unrelated chemically to any other drug in current use, Trancopal offers a completely new major chemical contribution to therapeutics.



Chlormezanone: 2-(4-chlorophenyl)-3-methyl-4-metathiazanone-1-dioxide

Clinical studies of over 4400 patients by 105 physicians[1] proved Trancopal remarkably effective in musculoskeletal conditions, anxiety and tension states.

MUSCULOSKELETAL DISORDERS

effective in

93%

of 1570 documented cases of

LOW BACK PAIN

(LUMBAGO, SACROILIAC DISORDERS)

By relieving muscle spasm and pain, Trancopal permits early and active exercise and physical therapy to accomplish maximal benefits for rapid recovery.

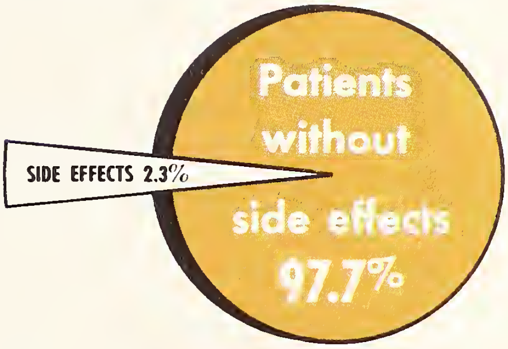
Trancopal

the first true tranquilaxant

BETTER TOLERATED AND SAFER THAN OLDER DRUGS[3]

With Trancopal there is no clouding of consciousness, no euphoria or depression. Even in high dosage, there is no perceptible soporific effect. Because it does not irritate gastric mucosa, it can be taken without regard to mealtimes. Administration does not hamper work—or play. Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage. Toxicity is extremely low. And Trancopal has a lower incidence of side effects than has zoxazolamine, methocarbamol or meprobamate.

INCIDENCE OF SIDE EFFECTS WITH TRANCOPAL IN 4483 PATIENTS



ANXIETY AND TENSION STATES

effective in 88% of 443 documented cases of DYSMENORRHEA

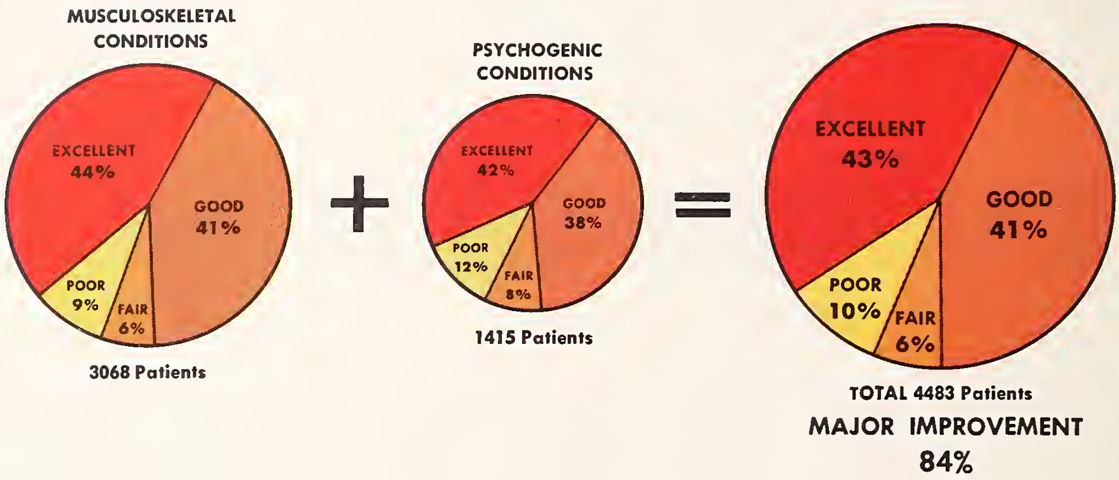
AND PREMENSTRUAL TENSION

Because of its exceptional calmative property, Trancopal "... allows the patient to use his energies in a more productive manner in overcoming his basic problems."[2]

Dosage: 100 to 200 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

Thoroughly evaluated clinically...

Clinical studies of 4483 patients by 105 physicians[1] have demonstrated that Trancopal often is effective when other drugs have failed. From these studies it is evident that Trancopal can provide more help for a greater number of tense, spastic, and/or emotionally upset patients than can any other chemotherapeutic agent in current use.



INDICATIONS

Musculoskeletal

- Low back pain (lumbago)
- Neck pain (torticollis, etc.)
- Bursitis
- Rheumatoid arthritis
- Osteoarthritis
- Disk syndrome
- Fibrositis
- Ankle sprain, tennis elbow, etc.
- Myositis
- Postoperative muscle spasm

Psychogenic

- Anxiety and tension states
- Dysmenorrhea
- Premenstrual tension
- Asthma
- Angina pectoris
- Alcoholism

Supplied: Trancopal Caplets® (scored) 100 mg., bottles of 100.

References: 1. Collective Study, Department of Medical Research, Winthrop Laboratories. • 2. Ganz, S.E : J. Indiana M. A. In press. • 3. Lichtman, A.L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958.

the first true tranquilaxant

Trancopal

Potent
MUSCLE RELAXANT
...Equally effective as a
TRANQUILIZER

Trancopal (brand of chlormezanone) and Caplets,
trademarks reg. U.S. Pat. Off.

Winthrop LABORATORIES
New York 18, New York

Printed in U. S. A. (419

RESEARCH:

key to Kent's popularity

In 1958, Kent made the greatest gain in popularity ever recorded by any filter cigarette in any year—a sales increase of 20-billion cigarettes.

Behind this popularity is a story of months and years of research, perfecting the remarkable combination of filter action and flavor found in today's Kent cigarette. In developing Kent, Lorillard research scientists recognized that smokers wanted, on the one hand, a really satisfying taste; on the other, reduced tars and nicotine. In addition, smokers demanded a free and easy draw.

These, then, were the objectives. The first scientific breakthrough in the project was the development of the exclusive Micronite filter, patented by Lorillard. This filter was created because of newly-discovered principles in the field of filtration, which have been previously described in these pages.

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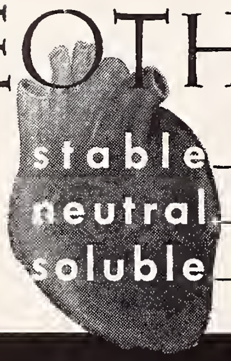

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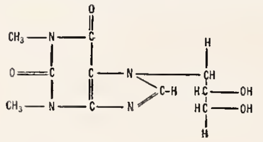

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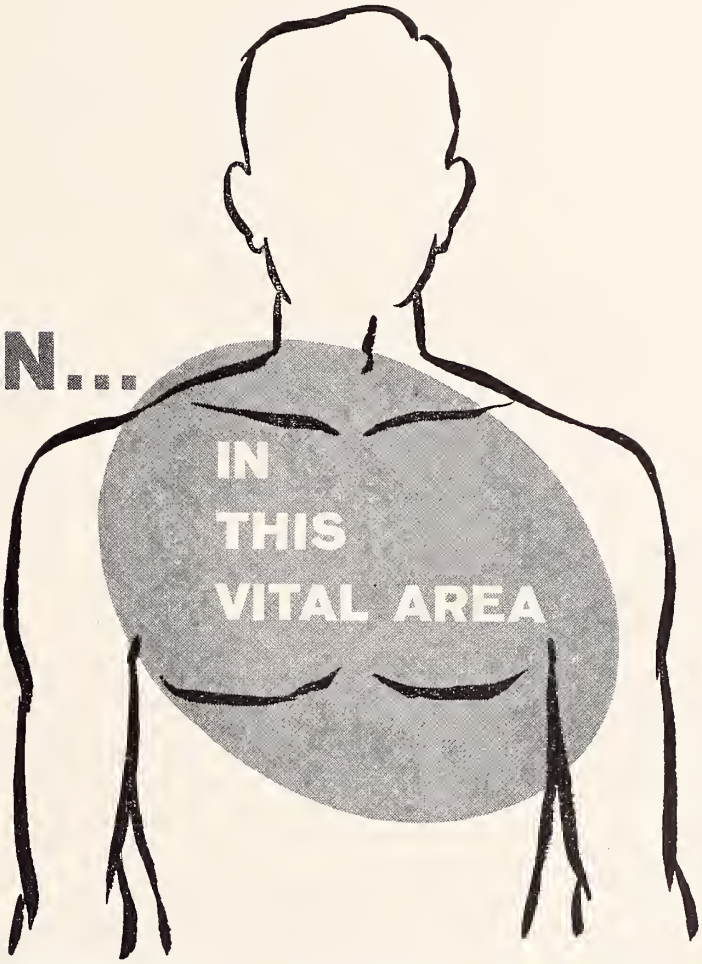

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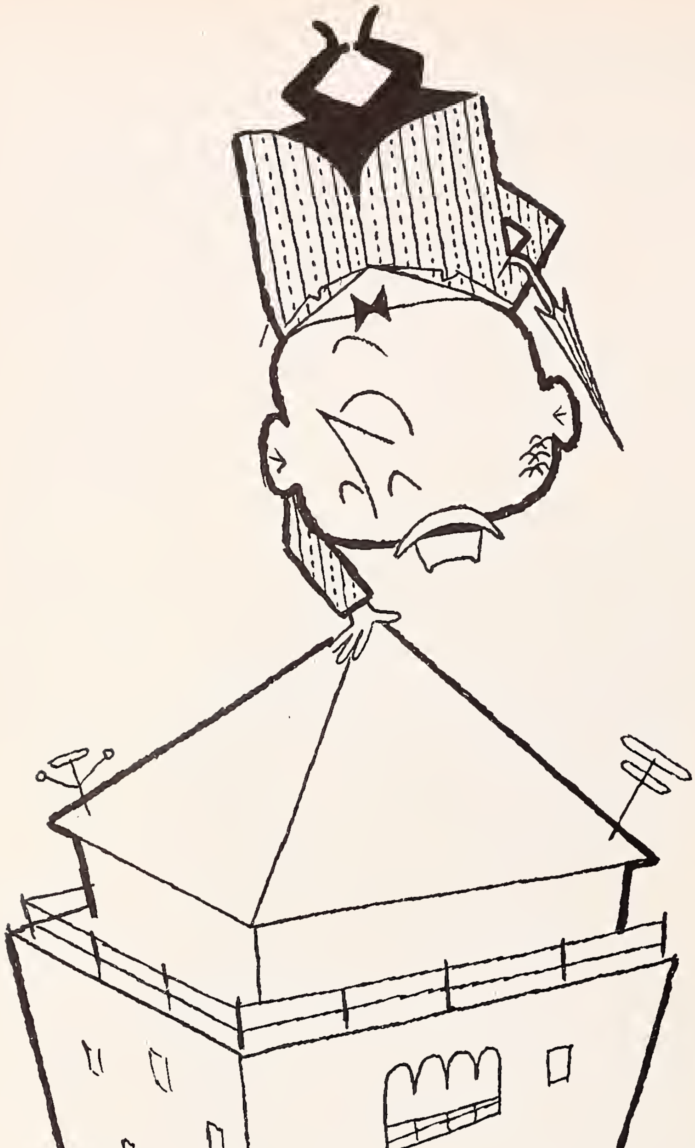

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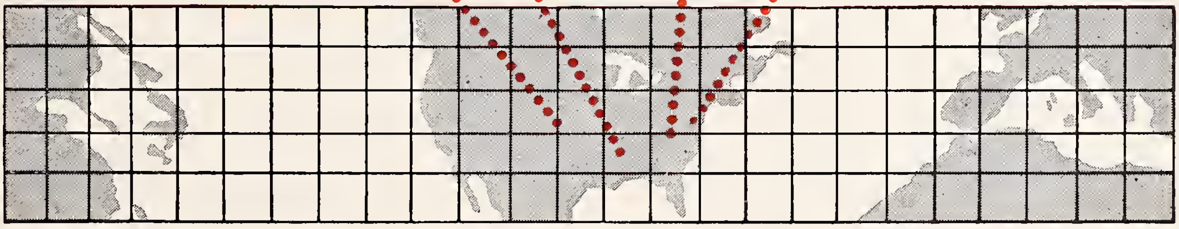

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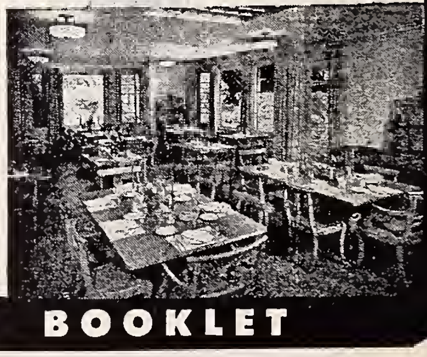

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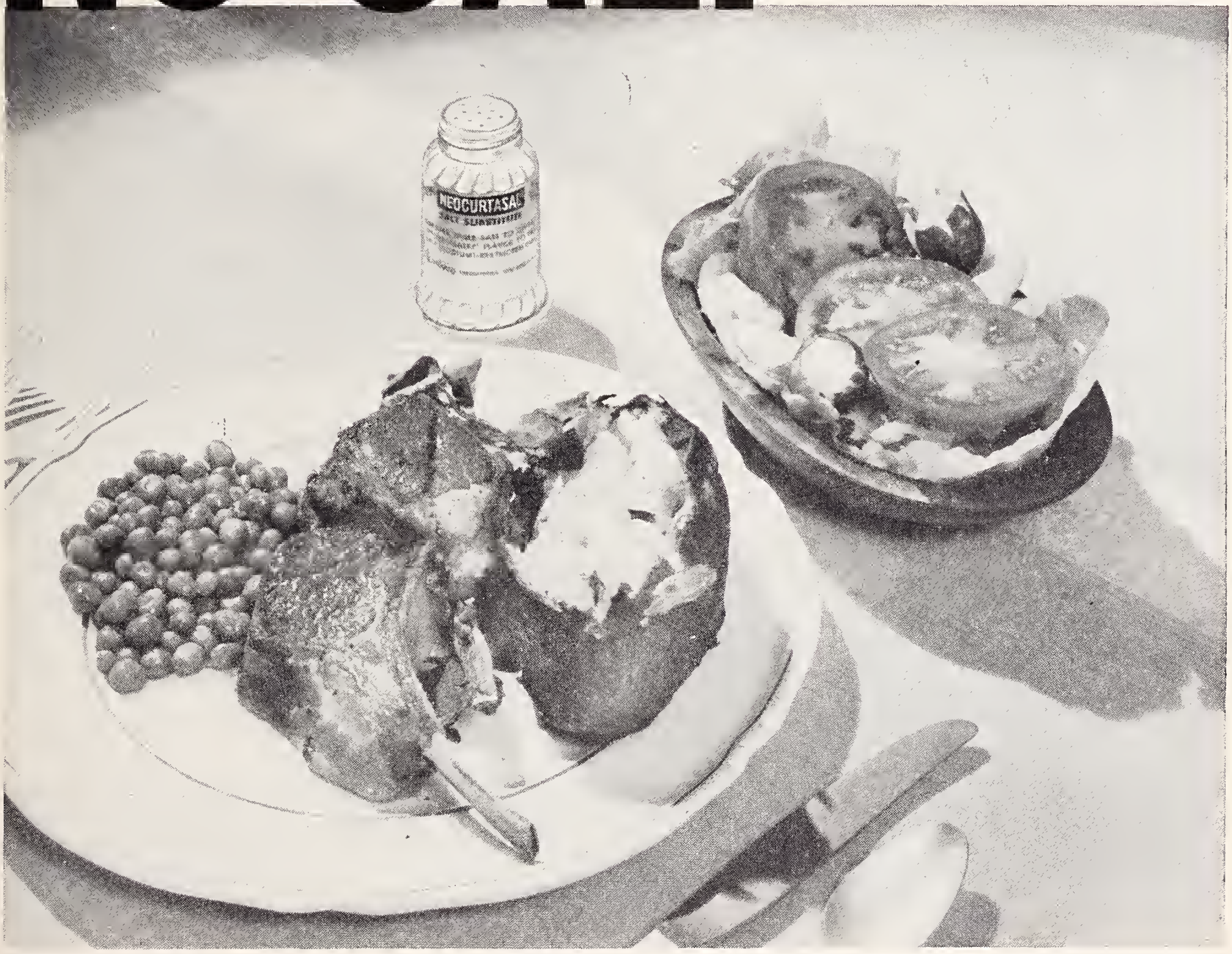

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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 7 JULY, 1959

Original Articles

CONGENITAL UNILATERAL MULTICYSTIC KIDNEY DISEASE IN INFANCY

C. W. Kurtz, M.D.*, and W. L. Valk, M.D.**

WITH THE aid of modern urological investigation, the average case of cystic disease of the kidneys is now easily recognized. The incidence as seen in infancy, however, remains far less common than one sees in adult life. The clinical features and diagnosis of congenital bilateral polycystic kidneys are well known; however, unilateral congenital multicystic kidneys in infants offer a greater diagnostic problem. Often they are identified only after exploration and then because of their multicystic nature are mis-described as "polycystic kidneys." Aside from the unilateral occurrence of the multicystic kidney, there are other anatomical features which would seem to justify its separation in classification from the more commonly recognized congenital polycystic kidneys. Four cases presented here show a strikingly similar clinical picture and are reported to further emphasize the anatomical differences between the relatively rare unilateral multicystic kidney and the better known congenital polycystic kidney, be it bilateral or unilateral.

Since the term, "unilateral multicystic kidney" was proposed in 1936 by Schwartz,(1) some 21 cases have been reported. Spence reviewed the literature and presented four cases of his own in 1955. Other authors(3-11) have made reference to its occurrence.

Various theories have been given to explain the etilogic causes of cystic changes in the kidneys. All have their points of acceptability. Of importance clinically is the fact that unilateral multicystic kidney disease is a congenital lesion on the basis of fetal maldevelopment without hereditary factors. Upon recognition of its gross characteristics, one may render a hopeful prognosis as to the future status of the remaining kidney. This is not the case in congenital polycystic kidney disease where bilateral involvement is the rule, if not initially, at least ultimately.

The classification of renal cysts as proposed by Braash and Hendrick(14) in 1944 (Table I) seems well accepted. Unilateral multicystic kidneys are a subdivision of simple cysts of the kidneys of congenital rather than acquired nature. Other varieties of simple type, solitary and multilocular cysts, are readily recognized from their gross appearance. Some confusion has arisen, however, in misuse of the descriptive term, "polycystic" by both clinician and pathologist to describe kidneys where more than one cyst is present. Although microscopically differentiation is often obscure if not impossible, the anatomical features along with clinical consideration of hereditary factors, bilaterality, and ultimately fatal outcome of the true congenital polycystic kidney clearly separate it from the unilateral multicystic kidney. These differences are summarized in Table II.

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TABLE I

Classification of renal cysts as proposed by Braash and Hendrick

1. Retention or inflamatory cysts
2. Simple cysts, single, multiple, multilocular and hemorrhagic
3. Peripelvic (pyelogenic cysts)
4. Parapelvic
5. Cysts secondary to renal pathological changes (calculus, Tbc, phelonephritis)
6. Polycystic kidneys

Clinically, the presenting complaint and diagnostic problem is one of a palpable unilateral abdominal mass. The mass is usually asymptomatic and occurs in an otherwise healthy appearing infant. Urinalysis and other laboratory studies are usually normal. A soft tissue mass is evident on roentgenogram of the abdomen. Excretory urography shows a non-functioning kidney on the involved side and a normal appearing kidney on the opposite side. Cystoscopy and retrograde study, when done, have revealed either an absence of the ureteral orifice on the side involved, or an abnormally small orifice with a blind termination below the uretero-pelvic junction.

After urological study is complete, a pre-operative diagnosis of hydronephrosis or Wilms's tumor is most commonly made. In the presence of a normal kidney on the opposite side, surgical exploration is indicated and need not be delayed. Both the transperitoneal and flank approach are satisfactory. The former is preferable since adequate examination of the opposite kidney can readily be performed and one has earlier access to the renal pedicle should tumor be found. Nephrectomy is performed where a unilateral multicystic kidney is found.

Cases

CASE # 1

#46-832. A newborn white female of a full term and normal pregnancy, weighed 3,535 gms. At birth, right abdominal distension with dullness was noted. A large freely movable right abdominal mass was present. A tentative diagnosis of hydronephrosis or Wilms's tumor was made.

Laboratory studies were within normal limits. Excretory urograms (Fig. IA) showed a normal left kidney and non-visualization of the right kidney. At one week of age, cystoscopy and retrograde pyelograms were attempted. Both ureteral orifices appeared normal. Attempts to pass a ureteral catheter up the right side were unsuccessful. The left retrograde showed a normal appearing kidney.

Surgical exploration was advised and a large

TABLE II

	Congenital, Unilateral Multicystic Kidney	*Congenital Polycystic Kidney*
Family History	Negative	Positive in infants in 37 per cent of cases (15-16)
Congenital	Yes, fetal maldevelopment	Yes, genetic factor
Extent	Unilateral	Almost always bilateral
Age	Neonatal to two years	Only 3 per cent under nine years of age
Prognosis	Good	Ultimately fatal
Associated anomalies	Rare	Frequent
Gross features	Kidney replaced by cysts of variable size; no recognizable gross kidney tissue; ureter frequently rudimentary.	Kidney is sponge-like with cysts of uniform size; reniform contour and calyceal pattern retained; ureter normal.
IVP	Non-function on involved side	— function depending on extent of renal damage
Laboratory	Negative usually	— albuminuria, — elevated BUN, — hypertension, — hematuria

multicystic mass (Fig. 1B) was present in the right retroperitoneal area. The ureter was threadlike in size and without a lumen beyond the uretero-pelvic junction. A nephrectomy was performed and the patient was discharged in good health on the 10th postoperative day.

The pathology report of the mass stated it to measure 11 x 6.5 x 3 cms. and weigh 120 gms. The lobules were transparent and contained straw colored fluid. Microscopically (Fig. 1C) the cysts were composed of "dense fibrinous tissue with dilated spaces lined by cuboidal epithelium. Continuity of renal tissue was distorted. Glomerular and tubular structures were seen, but were grossly distorted."

CASE # 2

# 48-4955. A white infant boy, the second of twins, born prematurely, weighed 2,110 gms. He expired 48 hours after birth following a period of acute respiratory difficulty. There was no clinical suspicion of other abnormalities.

Physical examination at birth was normal except for mild abdominal distention. Laboratory studies were essentially normal. At autopsy the

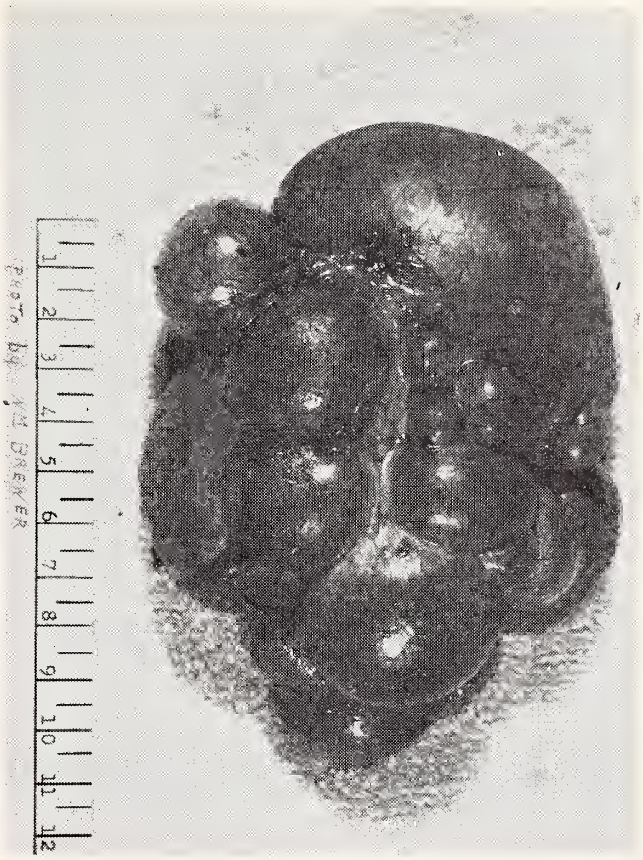

Fig. 1B. Gross specimen showing multiple cysts of varying size.

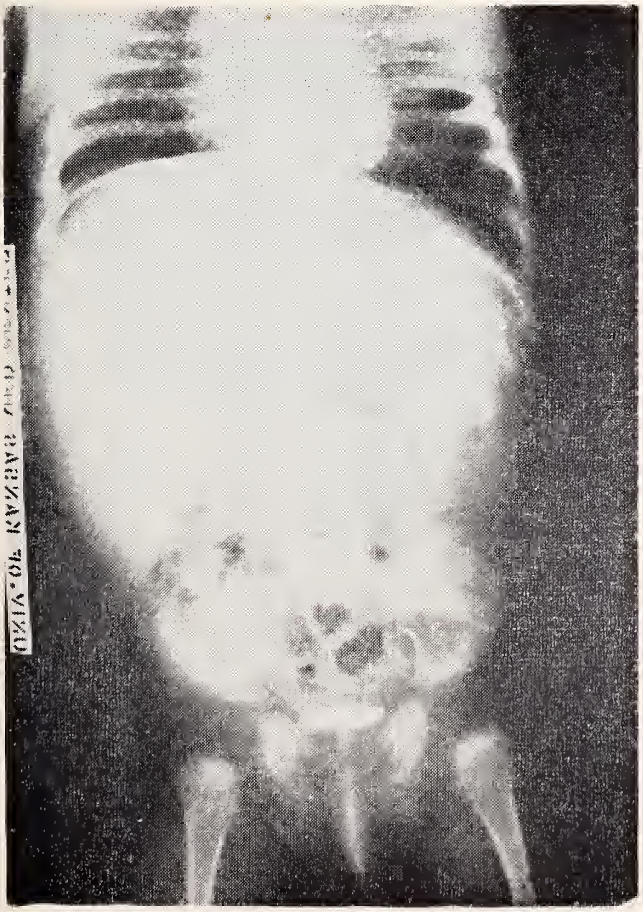

Fig. 1A. Excretory urogram showing large right abdominal mass with non-function of right kidney. Left kidney appears normal.

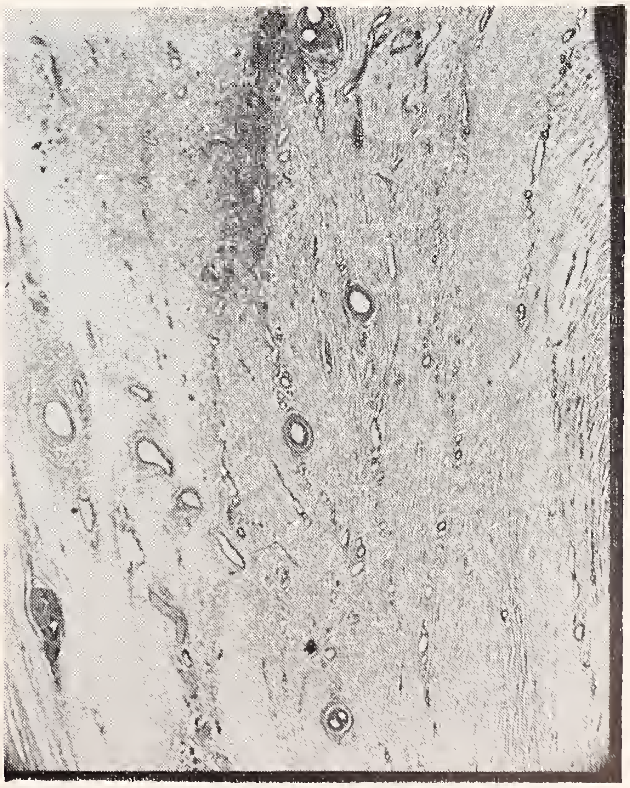

Fig. 1C. Low power microscopic view of tissue in area of hilum showing distorted glomeruli and tubular structures.

right kidney weighed 100 gms and measured 8 x 7 x 6 cms. It was composed entirely of a large multicystic mass grossly. A small amount of grayish brown tissue seen near the hilum represented all that was left of the renal architecture. Abnormal glomeruli and tubular structures were seen microscopically from tissue of this area. The left kidney was entirely normal.

CASE # 3

# 53-9103. A white female infant, age seven weeks, was admitted to the University of Kansas Medical Center because of a palpable mass in the right mid-abdomen. The mass was first noted at one week of age. The infant's general health and feeding habits were normal, and she was asymptomatic. The mass measured approximately 6 x 8 cms. in diameter, was non-tender and easily movable.

Laboratory findings were within normal limits. A flat plate film of the abdomen demonstrated a right abdominal mass with displacement of the bowel shadows to the left. Excretory urograms revealed a non-functioning right kidney and a normal appearing left kidney. At cystoscopy, the right ureteral orifice could not be identified. The clinical impression was hydronephrosis. Exploration was advised and the kidney approached through a right subcostal incision. A large multicystic mass found in the retroperitoneal area was removed. There was no recognizable kidney, pelvis or ureter. The left kidney was palpated and felt to be normal in size and position. The postoperative course was uneventful and the patient was discharged on the 10th postoperative day.

The pathology report of the specimen revealed the mass to weigh 51 gms. with multicystic masses measuring from .5 to 4 cms. diameter and containing clear fluid. No gross kidney tissue was recognizable although two small areas of solid consistency were noted. Sections through this solid area showed islands of cortical tissue with glomeruli and tubules. The cystic spaces were lined by low columnar and cuboidal epithelium.

CASE # 4

# 58-1011. A two-month old white male was admitted to the University of Kansas Medical Center because of a mass in the right abdomen which had been found on routine physical examination. His general health was good.

Laboratory studies were within normal limits. Excretory urograms (Fig. IIA) showed a normal appearing left kidney and a non-functioning right kidney. At cystoscopy a very small right ureteral orifice was seen. All attempts to catheterize the right ureter met with obstruction at 2 cms.

Surgical exploration was advised. Using a transperitoneal approach a large multicystic mass (Fig. IIB) was found in the right retroperitoneal area and removed. The ureter became thread-like approximately 3 cm. inferior to the kidney pelvis. Palpation of left kidney revealed it to be of normal size and consistency. The patient recovered and was discharged on the 10th postoperative day.

The gross specimen consisted of multiple cysts varying in size from 1 cm. to 6 cm. and containing clear fluid. Microscopically (Fig. IIC) areas of atypical glomeruli and tubuli formation were seen in the area of the hilum of the kidney.

In three of the four presented cases, the diagnosis of hydronephrosis or Wilms's tumor has

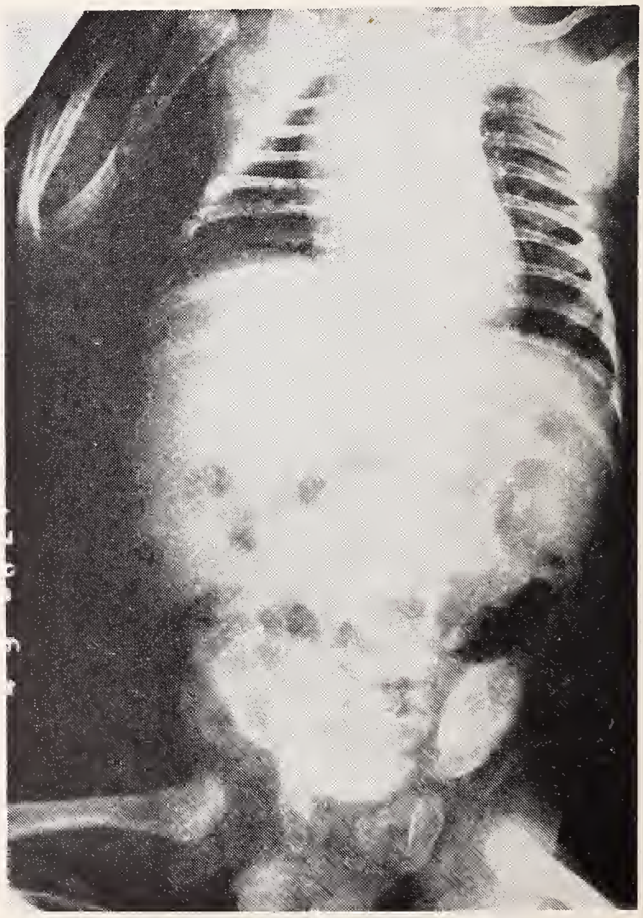

Fig. 2A. Excretory urogram showing normal left kidney, non-functioning right kidney with right abdominal mass.

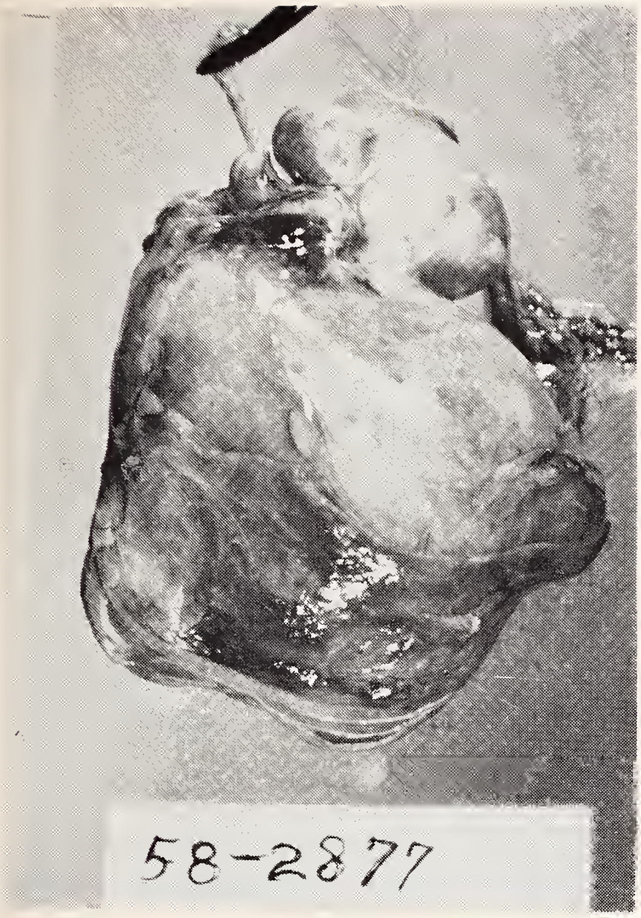

Fig. 2B. Gross specimen showing large multicystic mass.

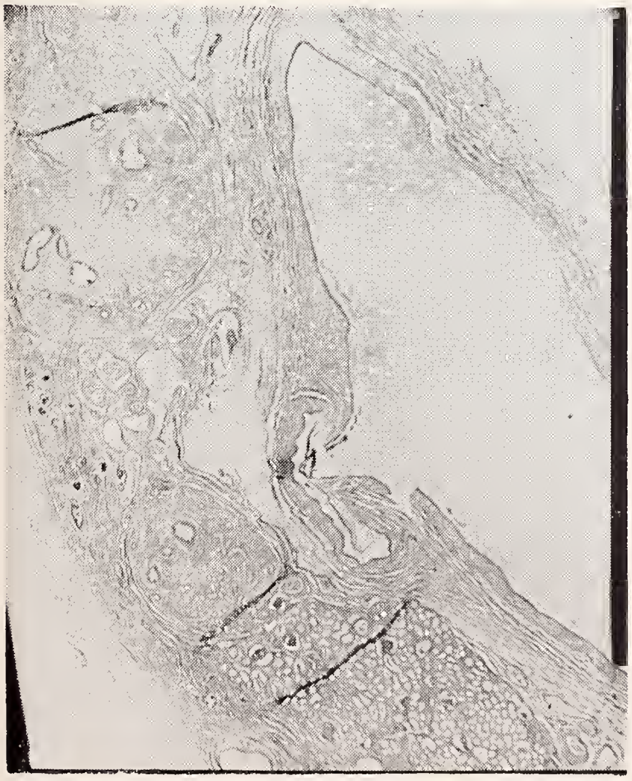

Fig. 2C. Low power microscopic view through tissue in area of hilum showing abnormal glomerular and tubular structures.

been made preoperatively. One case was found at autopsy. The gross appearance of the multicystic kidney in all four incidences was very similar with the kidney being replaced by cysts of variable size. No recognizable kidney parenchyma was noted grossly although miscroscopically all had glomerular and tubular structures which appeared embryonic or greatly distorted. The abnormality was unilateral in all four cases.

Summary

Unilateral multicystic kidney disease is a congenital defect in fetal development and not on a hereditary basis. The gross anatomical features, its unilaterality and good prognosis serve to differentiate it from the more commonly known congenital polycystic kidney. The entity should be considered in the differential diagnosis of abdominal masses in infancy. Excretory urograms show a non-functioning kidney on the involved side with a normal contralateral kidney. Ureteral abnormalities are very frequently associated with it. Nephrectomy is the treatment of choice and the prognosis is good. Four cases are presented.

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OVARIAN BRENNER TUMOR, A CASE REPORT

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HURXTHAL(1) has listed a number of terms applied, at different times, to the relatively common lesion which is now usually called the Brenner tumor. Some of these terms are "solid ovarian tumor," "fibroepithelioma," "oophormoa folliculare," "oophoroma," and "fibroma ovarii adenocysticum." The term "solid ovarian tumor" is probably the oldest and a relic of that period when benign and malignant tumors of epithelial and non-epithelial cell types were "lumped."

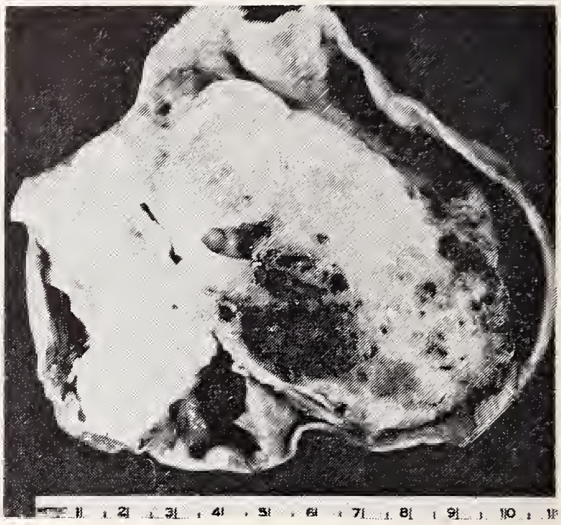
According to Geist(2), the lesion now termed Brenner tumor was first described by Orthman who classified it as a "fibroepithelioma." It was first described as an entity by Brenner(3) in 1907; he considered the lesion an ovarian follicle tumor and called it "oophoroma folliculare." There is, even now, no certainty regarding the genesis of the lesion.

The idea advanced by Meyer(4), that the tumor arises from the cell rests of Walthard, has gained acceptance by most students of the problem. Shiller(5) and Fox(6) have suggested that the tumor may arise from the mesonephron remnants commonly found in the rete. The fact that the Brenner tumor is rather frequently made up partially of simple tall columnar epithelium of mucinous type (the pattern, in certain regions, essentially duplicating that of pseudomucinous cystadenoma) lends support to the concept of Jondahl, Dockerty, and Randall(7) that it may represent one-sided development of a teratoma.

The Brenner tumor is usually completely unassociated with any clinically detectable endocrine effect, however, evidences of hormone production have been described by Selye(8).

The diagnosis cannot be made pre-operatively. The findings at the operating table are not diagnostic. The diagnosis can be accomplished only following histologic study of the excised tumor.

The following is a case report of a Brenner tumor which was found in a 62-year-old white woman who came in with a chief complaint of a pink vaginal discharge of one month's duration.



Brenner Tumor

The patient's past history included an appendectomy in 1927, and a T&A in 1920. Two of her sisters were diabetics. One raises the question whether incidence of Brenner tumor is higher in diabetics.

There was moderate obesity, however, there were no signs of virilization. Hydrothorax was not noted and acites was not present. The external genitalia were normal, however, a large mass about 20 cm. in diameter was noted in the left adnexa.

Routine CBS, sedimentation rate, and urinalysis were within normal limits. A non-fasting blood sugar was 115 mg. per cent. The Aschheim-Zondek test was negative. Pre-operative barium enema and upper GI series were also reported to be within normal limits. A cholecystogram revealed a solitary gall stone in a normally functioning gall bladder.

The pre-operative clinical diagnosis was "pelvic tumor, probable large fibroid tumor of the uterus."

Elective surgery for the removal of the tumor was performed by Dr. Raymond F. Bock. Under spinal anesthesia, a suprapubic midline incision was done through the skin and subcutaneous tissue. The fascia was opened, the rectus muscle retracted, and the peritoneum opened. Exploration of the abdomen revealed disease apparently limited to the pelvic viscera. There was a huge multiloculated cystic tumor, semi-hard in certain areas, completely involving the left ovary. The surgeon's gross diagnosis was pseudomucinous cystadenoma. The uterus and remaining right tube and ovary appeared normal. Numerous adhesions of bowel and omentum to this tumor mass were freed by blunt dissection. The cystic tumor was removad by multiple clamping, and tying of the pedicle. Consultation with the pathologist, Dr. Ralph H. Fuller, was asked before deciding on further removal of pelvic viscera. His immediate impression was "probable granulosa cell tumor." Because of the possible malignancy of this growth, it was decided to perform a pan-hysterectomy. The post-operative course was uneventful.

Two specimens were delivered to the pathologist for routine study. The first specimen, clinically identified as "left ovarian tumor and tube," was a mass which weighed 1,050 grams. The oviduct was considerably flattened and elongated. The ovary was presented as a tensely fluctuant, slightly lobulated but somewhat egg-shaped tumor which measured 19 cm. in greatest diameter. Following evacuation of mucinous fluid from several irregularly shaped cavities, the tumor weighed slightly less than 400 grams. The solid substance of the tumor was diffusely firm, fibrous, and ocher-yellow. The nature of the ovarian lesion was appreciated only following examination of routine miscroscopic sections. Microscopically, a highly characteristic "picture" was presented. Embedded in an abundant fibrous matrix were numerous Walthard-like cell-rests, small cavities lined with epithelium of transitional type, and larger cavities lined with single rows of tall, columnar epithelial cells having cytoplasm which appeared markedly mucinous. The second specimen was the uterus with attached adnexal structures (right ovary, oviduct, and mesosalpinx). Mild polypoid hyperplasia of the endometrium was noted; this specimen was otherwise remarkable in that considerable chronic uterine cervicitis was detected.

In order to avoid the hazard of a double count in some future enumeration of cases, it should be stated that this case was submitted to the American Registry of Pathology where it was given AFIP Assession No. 861029. The confirmatory registry diagnosis was "Brenner tumor with associated pseudomucinous cystadenoma."

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FATTY INFILTRATION OF THE LIVER: A CLINICAL AND PATHOLOGICAL CORRELATION*

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BY THE needle biopsy technique, it has been possible to study histologically the livers of patients who are admitted for varied symptom complexes(1). During the examination of many patients, hepatomegaly has been encountered in patients not primarily admitted for liver disease. In recent years there appears to be an increase in the problem of diffuse fibrosis of the liver or cirrhosis, in which the alcoholic history is negligible or minimal, and with no past history of hepatitis or exposure to any type of hepato-toxic agent. This study is an attempt to emphasize the relatively benign nature of the so-called latent fatty liver or early fatty infiltration of the liver which if unrecognized and persists may be the precursor of cirrhosis of the liver(2). These latent cases usually come under observation with chronic illnesses, usually with malnutrition and on the other extreme, over-nutrition, such as obesity. Any alcoholic history usually is mild.

Acute fatty infiltration of the liver in many cases is a transitory phenomenon. It is found in alcoholism, exposure to hepato-toxic agents of a chemical nature as arsenic, chloroform, lead, and in certain bacterial infections. The process is reversible with control of the infection or removal from hepato-toxic agent.

A series of 17 patients were observed whom in the course of a physical examination were found to have enlarged livers. These patients were not primarily admitted for liver disease. In all these patients, the only abnormality encountered was significant increases in dye clearances (elevation of the 45-minute bromsulfalein test). Liver biopsy studies revealed in all instances histological increases of the fat content. The increase in fat is primarily intra-cellular and, as expected, resulted in hepatic cell dysfunction as measured by dye clearance. The fatty changes were not advanced sufficiently to alter any of the other liver function tests.

The importance of recognition of the early fatty liver is that fatty changes may persist and become the structural basis for the sequelae of diffuse septal cirrhosis(3). A gradual transition can be observed from (a) an increase in central and peri-portal fat, to (b) fatty metamorphosis, to (c) formation of fatty cysts, to (d) fibrosis, and (e) cirrhosis. In advanced cases, different stages of these processes can be seen in the same liver. However, fatty liver in man does not necessarily lead to cirrhosis. A progression of the fatty liver to cirrhosis may be accelerated by various factors, such as (a) intercurrent infection, (b) anemia and anoxia, (c) cardiac failure from various conditions, (d) toxic factors in alcoholic beverages, (e) genetic and constitutional factors, (f) endocrine factors, and (g) starvation.

Clinical Manifestations:

The liver edges are large, smooth and firm and patient does not present any subjective manifestations. Splenomegaly is rare. Ascites, edema, and spider nevi are infrequent. Jaundice is mild, if present.

Laboratory Findings:

Survey of many cases reported by various authors indicates that the most frequent abnormal hepatic function test is the increased bromsulfalcin retention found in 70 per cent of the cases(4). Since the fatty changes are primarily intracellular and the bromsulfalein test is considered the best test for determining functioning hepatic cell mass, it necessarily follows that this would be the most sensitive test. As was shown many years ago, the removal of as little as one-eighth of a dog's liver would produce a definite increase in the amount of bromsulfalein retained and there is ample evidence that the same situation exists in the human subject.

Histologically, the degree of fatty metamorphosis varies from fat deposition in a few scattered cells to diffuse involvement of nearly all cells. Usually more fat is found centrally than peripherally. In advanced cases, the fat droplets are often large and sometimes form fatty cysts. The Kupffer cells are small and fat-free, and the sinusoids are narrow. Areas of focal necrosis are sparse and portal cellular inflammation and ductular proliferation are not conspicuous.

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Presented at the Arizona Regional Meeting of the American College of Physicians on Oct. 18, 1958.

Therapeutic Aspects:

The removal of fat from the fatty liver is not difficult and has been demonstrated by liver biopsies. To obtain this improvement, bed rest alone with a basic diet containing at least one gram of protein per kilogram of body weight appears adequate. If alcoholism existed, withdrawal is essential. The use of lipotropic agents such as choline and methionine as supplements to a normal diet does not accelerate the removal of fat from the liver. Thus, removal of fat seems to depend upon improvement of the nitrogen balance.

Fat removal does not necessarily arrest fibrosis, nor do lipotropic supplements have any added effect. The use of testosterone in maintaining nitrogen balance is also not particularly additive in therapy. Fat intake as long as sufficient protein is in the diet, does not appear to be harmful and does not produce fatty infiltration. Indeed, the continuation of some alcohol in moderate amounts while on this nutritious diet does not prevent fat removal, or clinical improvement, but continued alcohol intake with a poor diet, prevents the disappearance of fat.

Summary

Fatty infiltration of the liver is a very common finding in many patients with chronie diseases. Malnutrition is the predominant cause, with alcoholism being a minimal factor. It usually is present as an asymptomatic enlargement of the liver with the only abnormality in liver function being delay in dye excretion (BSP retention).

It is usually a transitory phenomenon, reversible with correction of nutrition, even though the primary illness may persist.

Unrecognized, these fatty liver changes may become the basis for development of diffuse hepatic fibrosis, especially if accelerated factors appear such as anemia, anoxia, cardiac failure and infection.

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A SURGICAL METHOD FOR CONTROL OF BLEEDING ESOPHAGEL VARICES*

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IN patients suffering of esophageal varices, internal hemorrhage can be very profuse and frequently fatal or at least repeatedly dangerous, but always becoming a dramatic moment which we sometimes have to face in the course of medical practice, forcing us to make quick decisions to control: (1) a hemorrhage that may cause the death of the patient in a matter of minutes, and (2) prevent the repetition of such episodes since they are a constant menace to the life of the patient.

Temporarily, we can control the massive hemorrhage or the slow and persistent bleeding with the Sengstaken-Blakemore tube, which is the simplest and most useful procedure, as is already well known to all of you.

For those of you who do not know this apparatus, and the way it works, which is very important, I am taking the liberty of discussing it. It consists of a rubber tube with a diameter approximately the same as that of a Levin tube with the lumen diveded into three compartments, all of them completely isolated and independent. The largest space exists throughout the entire length of the instrument and opens at the proximal end in an orifice through which a suction tip or a feeding tube can be inserted; the distal end is open through the small openings. One of the smaller spaces also has a proximal opening, and ends in the inside of a short balloon. The other small space starts at the proximal end and leads to the interior of a large balloon. For the proper placing of this instrument to accomplish hemostatic compression, the collapsed tube is introduced through the nose and esophagus until the small balloon has entered the stomach; then air is pumped in with a syringe until a volume similar to that of a baseball is obtained (each instrument contains specific instructions). Pulling the tube outward with a slow motion until it stops indicates that the balloon has reached the cardiac opening of the stomach; then the larger balloon is inflated to a pre-calculated volume to produce compression on the esophageal walls and therefore control the bleeding. In this position, with one inflated balloon above the cardias and another below this opening, there is no way to vomit or swallow the instrument. Through the major lumen which now is open at the distal end inside of the stomach, a suction apparatus is adapted to the proximal end for the aspiration of the blood collected into the gastric cavity and later on, it can be used for feeding nourishing preparations in liquid form.

This is the way we can solve the emergency of the problem caused by the hemorrhage and temporarily get the life of the patient out of danger. However, the episodes recur in a very unexpected way and at almost any time.

Procedures and Results

Under certain conditions, some patients may live several years with a liver cirrhosis and sometimes, when possible, get a fundamental cure; many patients, unfortunately, will not survive the episodes of bleeding. Having in mind the severity of this problem, several surgical procedures have been recommended throughout the years and very seldom used or definitely discarded. Actually, the best procedures now in use are: The resection of varicosed veins with open esophagus and the anastomotic venous shunts, portal vein to inferior vena cava and splenic vein to renal vein. These are the procedures selected by a number of surgeons, classifying them as the most resourceful to improve portal hypertension and, in consequence, relieve the varices of the esophagus. Doubtlessly, this surgical procedure is subject to objections, considered both basic and definite.

A century ago, Eck, the Russian physiologist showed in animals of experimentation that when the operation designed by him (Eck's fistula) is practiced in normal specimens, the liver showed evident atrophy, according with the conception that prevailed then, and a number of the cases died within one year, at different intervals.

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*Presented before the Medical Society of the United States & Mexico, December, 1958, Guadalajara, Mexico.

Recently, it has been shown that some animals, with the same type of operation, developed an elevated level of ammonia in the blood, together with a retention of abnormal amino acids and a failure in the electrolytic balance, which appears shortly before death in most of the cases. This surgical procedure, when practiced on human beings, with the idea of decreasing the portal hypertension, does not give any protection against recurring attacks of hemorrhage: the venous shunt works deficiently or is completely obstructed. This technique, even in hands of the greatest experience, reports a mortality rate of 25 per cent to 50 per cent of the cases, which is very close to the percentage of mortality caused by hemorrhage in patients who have not had any surgical intervention performed on them.

Clinical research has ventured the theory, very well based in some instances, that several patients survive several years arfter surgery by accidental closure of the anastomosis. Finally, the resulting rate was not much higher than the rate obtained in non-surgical cases.

All these circumstances seem to point out that the surgical technique above described is mostly practiced because of the necessity of an active effort to help a sick person whose death can occur at any time.

In such a case, we should have done something similar, but on the other hand, only an effort not implying more than a reasonable surgical risk and also able to protect the patient against the possible recurrences for some length of time without producing obstacles to change the hepatic disease with the aid of medical treatment and proper diet.

On June 27, 1957, a 55 year old female came to my office. One look at her and you could see the paleness of skin and mucosa, generalized weakness and obvious loss of weight. The physical examination showed a collection of liquid in the abdominal cavity and a painful spleen, reaching three inches below the left costal margin. Her history went back 10 years, when she had first noticed a tumor in the splenic region, diarrhea, general and abdominal malaise, anorexia and extreme weakness. Medical treatment was given and she spent several years with improvement for certain periods of time, but always followed by recurring attacks.

In the middle of 1956, she suffered a considerable loss of blood, both by mouth and by rectum, thus aggravating her general condition. Blood transfusions and other elements of medical therapy were carried on with improvement, but the episodes of bleeding kept coming back until after six of such episodes, she was admitted to a hospital.

The laboratory work showed: RBC 1, 200, 00; hemoglobin 5.4 gms.; serum protein 3.8 gms.; A/G ratio 1/1; BSP test 2 mgs. per kilo; Upper GI series showed evidence of numerous and well developed varices, obviously the source of bleeding.

Treatment and Surgery

The patient was placed on absolute bed rest, proper diet and medical treatment. Transfusions promptly improved the general condition. During the first days in August, just about a month after treatment had commenced, the patient noticed a sensation that could not easily be described but that was located behind the midline of the chest and around the epigastrium, the same type of feeling she had observed before other attacks of bleeding, thus making her believe that a new attack was coming on. With this fear in mind, surgery was decided on and performed on Aug. 6, 1957.

Through a transthoracic approach, the esophagus was exposed. All the peri-esophageal space was crossed by large and tortuous blood vessels which were isolated and then ligated. All the palpable and visible fibers of the vagus nerve were also isolated and severed in an extension of two to two-and-a-half inches after ligation, with the idea of decreasing gastric acidity and the risk of peptic erosion.

When the muscular layer was cut, the large varicosed veins in the submucosa could be seen. Avoiding them carefully, an incision was made on the mucosa (three to four inches long) with the cardia included, the most impressionable varices appeared before our eyes, the walls so thin that they seemed to rupture with the slightest touch. All were ligated as thoroughly as possible with chromic catgut. No varices were found on the gastric side of the cardia.

The deep layers of the incision were closed and only the skin incision was carried down to the abdomen, the abdominal cavity was later exposed showing a spleen about eight times larger than normal, which was removed. A gastrostomy tube was left to avoid gastric retention. The immediate post-operative condition was uneventful and on the third post-operative day feedings were initiated through the tube, which served its purpose until the 12th day.

The patient was placed under observation the following two months with slow but definite improvement and finally discharged on Oct. 4, completely asymptomatic. The last time she was seen, 14 months after surgery, she was doing very well, possibly with the proper dietetic care, the lived had regenerated and portal hypertension improved thanks to the help offered by the surgical procedure carried on in her case.

We feel that there are other patients in the same condition as described in the case presented here. These patients could be occasionally improved if the liver can return to a good functional condition. The way of doing it is with a surgical procedure carrying a reasonable risk under hands with certain experience. Nothing about it is new except, perhaps, the vagotomy which we think adds a new element of security, although we have no proof regarding it.

Recently, other cases in the same condition have been treated by this technique, the observations after surgery, however, are placed within such a small amounts of time that no practical conclusions can be obtained as yet.

"UNA TACTICA QUIRURGICA PARA AFRONTAR LA HEMORRAGIA EN VARICES ESOFAGICAS*"

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LA hemorragia interna exanguinante y frecuentemente mortal o repetidamente amenazante, en pacientes con várices esofágo-gástricas es un acontecimiento dramático que todos los médicos tenemos que afrontar en diversas ocasiones de nuestra vida y frente al cual tenemos que mostrar decisiones rápidas y eficaces que controlen: 1o. – inmediatamente una hemorragia que está acabando con la vida de un paciente por minutos. 2o. Que prevengan la repetición de este episodio que insistentemente amenaza al enfermo en cualquier momento de su frágil existencia.

Para controlar momentaneamente ya sea el episodio de hemorragia masiva o el de hemorragia lenta y persistente no tenemos otro procedimiento más eficaz ni más simple que el aparato compresor de Sengstaken-Blakemore que Uds. conocen, ya sea prácticamente o en los libros (Place).

Para aquellos que no están familiarizados con este instrumento y su manejo, cosa que es de primerísima necesidad, voy a deseribirlo. Está integrado fundamentalmente por un tubo de hule del calibre de una sonda de Levin, cuya luz está tabicada longitudinalmente dividiéndola en tres compartimentos. El compartimento más amplio atraviesa todo el aparto y desemboca por su extremo proximal en una boquilla a la que puede adaptarse un tubo de succión o de alimentación por su extremo distal se abre por los orificios. Uno de los conductos pequeños tienen también su boquilla exterior o proximal y termina en el interior del balón corto. El otro conducto pequeño, va también desde su boquilla proximal y desemboca en el interior del balón largo. Para colocarlo con fin comprensivo hemostático se introduce, colapsado, por la nariz hasta que el balón chico ha penetrado en el estómago; se infla inyectando aire con una jeringa hasta un volúmen semejante a una pelota de beisbol (con cada aparato se suministran instrucciones precisas). Se tira entonces del tubo hacia afuera hasta que se encuentra resistencia a su salida; el baloncito inflado no puede salir del estómago através del cardias. Se infla entonces el balón largo hasta un calibre y presión determinadas lo que produce compresión sobre las paredes del esófago y acción hemostática. El aparato con un balón por debajo y otro por encima del cardias no quede ser tragado ni vomitado. Através del compartimento amplio que ahora desemboca en el estómago, se establece primeramente succión para evacuar el contenido hemorrágico y posteriormente se puede intro ducir un alimento líquido.

Así podemos resolver emergentemente el problema presentado por la hemorragia actual y salvar por ahora la vida del paciente. Pero estos episodios exanguinantes lo amenazarán de contínuo y pueden repetirse de un modo inesperado. Algunos pacientes puedenvivir, en ciertas condiciones, portadores de una cirrosis hepática, por largos años y aún alcanzar una curación fundamental cuando esta es aún posible; pero muchos no sobrevivirán a las hemorragias fulminantes o recidivantes de origen varicoso esofágico. Con el propósito de aliviar o curar transitoria o definitivamente esta condición, secundaria en cuanto a su propia existencia, pero no por esto menos grave, se han ideado procedimientos quirúrgicos diversos através de los años; mismos que han sido sucesivamente abandonados o escasamente practicados. Actualmente los que gozan de mayor popularidad son: la ablación de las varidosidades submucosas en esófago abierto y sobre todo las anastomosis venosas derivativas portocaval y esplenorenal. Estas anastomosis venosas gozan de la predilección de buen número de cirujanos que las consideran como el recurso más eficaz para corregir la hipertensión portal y aliviar el estado varicoso esofagiano. Pero indudablemente esta operación también esta sujeta a objeciones que han sido consideradas fundamentales. Desde hace cerca de un siglo Eck, fisiólogo ruso, demostró experimentalmente que cuando se practicó esta operación (fístula de Eck) en animales sanos, su hígado se "atrofió", término de acuerdo con la concepción de aquel tiempo, y buen número de ellos murieron a intervalos variables dentro de un año.

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*Presented before the Medical Society of the United States & Mexico, December, 1958, Guadalajara, Mexico.

Modernamente se ha demostrado también que en animales así operados se eleva la tasa de amoniaco en la sangre, hay retención de amino-ácidos anormales y aparece un desequilibrio electrolítico antes de sobrevenir la muerte en un alto procentaje de ellos. Esta operación practicada en el hombre para aliviar la hipertensón portal cuando hay hemorragias recidivantes por várices esofágicas no protege absolutamente contra recaídas el funcionamiento de la anastomosis venosa frecuentemente es defectuosa o se obstruye totalmente. Esta intervención aun en las manos más expertas implica una mortalidad operatoria de 25 a 50%, mortalidad muy cercana a la producción por la propia hemorragia varicosa en pacientes intactos. Algunos investigadores clínicos han aventurado la opinión, en ciertos casos bien fundamentada, de que gran número de pacientes operados así y que han sobrevivido algunos años, fué debido a la oclusión accidental de la anastomosis venosa practicada. Y finalmente que esta superviviencia en general no fué notablemente mayor que la observada en grupos de pacientes que no fueron operados.

En vista de todas estas circunstancias desalentadoras me ha parecido que la práctica de estas anastomosis venosas en la terapéutica quirúrgica es más bien impulsada por la desesperante demanda de un esfuerzo activo en auxilio de un paciente que está viendo la muerte suspendida a unos centímetros sobre su cabeza.

En presencia de tales situaciones yo he debido emprender este esfuerzo activo, pero he buscado que sea un esfuerzo que implique un riesgo operatorio razonable para el enfermo, que lo proteja contra nuevas hemorragias por un tiempo suficiente y que no vaya a constituir un obstáculo para que el tratmiento médico y dietético quedan, entre tanto, modificar favorablemente el curso de su padecimiento hepático, si esto es aun posible, lo que constituye la esperanza verdadera y final de estos pacientes.

El día 27 de junio de 1957 llegó a mis manos una paciente mujer de 55 años de edad, su aspecto general era verdaderamente lastimoso: presentaba una palidez de la piel y mucosas en grado extremo; enflaquecimiento marcado, el semblante macilento y una actitud por la que se adivinaba una gran debilidad. Se apreciaba un derrame ascítico moderado y el bazo era palpable hacia unos 6 u 8 centímetros debajo del borde costal izquierdo. Narró que sus padecimientos relacionados con su estado actual principiaron hace diez años en que apareció la tumoración esplénica que ahora se aprecia y que era muy dolorosa a la palpación; así mismo diarrea, malestar general y abdominal, anorexia y debilidad extrema; poco después hizo su aparición el derrame ascítico que llegó a ser considerable agravando la molestia abdominal. Recibió por entonces tratamiento médico intermitentemente con el cual mejoraban o recrudecían sus males alternativamente. Transcurrieron así los años hasta mediados de 1956 en que se presentó una hematemesis abundante y melenas que agravaron su estado general. Se le administraron entonces transfusiones sanguíneas y medicamentos que la mejoraron transitoriamente pero las hematemesis se sepitieron en abundancia en número de cinco o seis en el transcurso de un año; la última y más grave aconteció una semana antes de ser hospitalizada bajo mi cuidado.

En la exploración paraclínica practicada se encontraron las siguientes alteraciones dignas de mención: eritrocitos 1,200,000; hemoglobina 5.4 gms.; proteinas séricas totales 3.8 gms.; relación albúmina-globulinas 1/1.; eliminación de la bromosulfacina 2 mgs. por kg. dentro de límites normales. El exámen radiográfico del esófago que presento a ustedes en esta proyección (placa) mostró la existencia de numerosas y bien desarrolladas varicosidades a las que atribuimos la causa de las hematemesis.

La paciente fué confinada al reposo en cama, tratamiento médico y dieta apropiadas y transfusiones periódicas de sangre que pronto mejoraron su estado general y el derra me ascítico.

En los primeros días del mes de agosto siguiente, poco más de un mes desde el principio de este tratamiento, la enferma dijo experimentar una sensación general indefinida e indescriptible y una molestia epigástrica y retroesternal, mismas que había experimentado poco antes de las hematemesis ya sufridas y nos asequró que una nueva hemorragía era inminente. Ante este temor decidimos intervenir quirúrgicamente el dia seis de agosto de 1957. A través de una incisión transtorácica abordamos el esófago que presentó, antes de la incisón pleural, el aspecto que pueden observar en esta fotografia (placa) Todo el espacio celular periesofágico estaba atravesado por gruesas venas que fueron disecadas cuidadosamente y ligadas hasta liberar completamente el esófago de su lecho celular y de todas sus conexiones vasculares (placa). Todas las fibras visibles y palpables de los nervios vagos fueron así mismo disecadas, ligadas y extirpadas en una extensión de 3 ó 4 centímetros con el propósito de deprimir la acidéz gástrica y disminuir el riesgo de erosión péptica de las varicosidades.

Incindida la capa muscular translucieron através de la submucosa las gruesas dilataciones varicosas. A lo largo de una línea que las esquivaba en lo posible se incindió la mucosa en una extensión de 10 a 12 centímetros incluso el cardias apareciendo a nuestra vista las más impresionantes varices que hubiéramos imaginado de paredes tan delgadas que parecían romperse al menor roce. Todas fueron ligadas por suturas continuas con catgut crómico, en la mayor extensión posible. No se encontraron dilataciones venosas apreciables sobre el lado gástrico subyacente al cardias. So suturó el esófago por planos y puntos separados. Se prolongó entonces la incisión hacia la pared abdominal, se incindió el diafragma ampliamente y se practicó la excisión de un bazo que era aproximadamente ocho veces mayor en tamaño, que normalmente. Se colocó en el estómago una sonda de gastrostomía para afrontar la posible ocurrencia de retención gástrica consecutiva a la vagotomiá, retención que no llegó a ser notable. Bajo los cuidados postoperatorios de rutina en estos casas la paciente evolución sin incidentes dignos de mención. Desde el tercer día se le administró alimentación líquida através de la sonda de gastrostomía la cual fue retirada el doceavo día.

Permaneció la enferma en observación constante durante los doas meses siguientes, en el transcurso de los cuales mejoró paulatinamente de su estado general y demás molestias y fué dada de alta el cuatro de octubre libre de cualquier síntoma o signo que fuera molesto para ella. En entrevistas subsecuentes por noticias recibidas hasta catorce meses después de la intervención, sabemos que se encuentra gozando de buena salud aparente. Bajo una dietética apropiada probablemente su hígado se ha regenerado y la hipertensión portal se ha corregido gracias a la protección emergente que esta operación le proporcionó.

Creemos que pueden existir otros pacientes en situación semejante y que pueden recibir beneficios también semejantes y cuando su lesión hepática es aun regenerable, tener tiempo para curar. Es una táctica sencilla que implica un riesgo razonable y al alcance técnico dé un cirujano con cierta experiencia. No hay nada nuevo en ella salvo, puede ser, la asociación de la vagotomía que creemos añade un factor de seguridad pero no tenemos prueba de ello.

Posteriormente hemos intervenido sobre pacientes en condiciones semejantes al caso descrito pero en ellos solo ha transcurrido muy corto tiempo, lo que no nos permite aún hacer conclusiones de grupo de alcance práctico.

THE TREATMENT OF POISONOUS BITES AND STINGS

I. Rattlesnake Bite

Henry P. Limbacher, A.B., M.D. and Charles H. Lowe, Jr. Ph.D.

THIS is the first of a series of reports on treatments for poisonous animal bits and stings prepared by a special committee of the Pima County Medical Society. The report recommends a definite plan of treatment for the use of physicians and interested laymen. It is based on an evaluation of the considerable and contradictory literature. Subsequent reports will concern the bites and/or stings of coral snakes, Gila monsters, scorpions, and black widow spider.

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THE HAZARD

What is the hazard of death from rattlesnake poisoning? As it is greatly overestimated by most people, there are frequent inaccurate statements regarding mortality. Of all rattlesnake bites in the United States, which total on the order of 1,000 per annum, fatalities are estimated at 30, or 3 per cent of those bitten(1).

Sublethal tissue damage following rattlesnake bites has varied from *no damage at all to considerable damage of a permanent nature* requiring plastic repair and accompanied by some deformity. Much of the damage to tissue in certain cases has been caused by some forms of treatment, such as drastic tissue refrigeration and inexpert surgery. Most unfortunately, this may also occur (as may near-fatal analphylactic shock from horse-serum antivenin) in cases of rattlesnake bite in which no treatment of any kind is necessary for a probably uneventful "recovery."

THE VENOM

The following substances, and others, are present in varying amounts in rattlesnake venom (1, 2, 3, 4, 5, 12):

1) *Proteases* produce destructive effects at the site of the bite and play a role in remote visceral *hemorrhage.* They act as does thrombin in converting fibrinogen to fibrin in the absence of other clotting factors, or as thromboplastic activity converting prothrombin to thrombin. The final result is *afibrinogenemia* and *thrombosis.* In a recent reported case(6) the fibrinogen level (normal, 250-400 mg. %) dropped to zero at three hours after the bite. At the same time no clot formed in 36 hours (normal, 15-20 minutes).

2) *Phosphatidases* are responsible for *hemolysis* and alter excitability and conductivity in skeletal, smooth, and cardiac muscle. Lecithinase splits off the unsaturated acids of lecithins to produce powerfully hemolytic lysolethins.

3) *Neurotoxins* are of minor importance in rattlesnake venoms as compared to the venoms of cobras, coral snakes, and their relatives. Neurotoxins produce a *curare-like effect* on the myoneural junction, interfere with nerve trunk conduction, or act directly on the central nervous system; they may produce nausea, vomiting, and rarely result in bulbar paralysis.

4) *Hyaluronidase,* which functions as a venom-spreading factor, is not toxic but is antigenic and specific antiserum inactivates it. Venom is disseminated via the lymphatics, and virtually none of it via the blood.

FACTORS AFFECTING THE GRAVITY OF THE BITE[1]

1. *The young, aged, and debilitated are especially susceptible.* The mortality among children is approximately twice that of adults, for the capacity of humans and other species to successfully withstand a given quantity of rattlesnake venom is proportional to the weight of the body.

2. *Individual susceptibility.* Persons who swell very easily from insect stings or bites, appear to be affected more by snake bite. Those who are especially nervous and excitable often have more of a reaction because of increased heat rate and circulation, which in turns enhances the spread of venom.

3. *Activity following the bite.* Walking, run-

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[1] See Klauber (1, 7), and Minton (8).

ning, etc., accelerates circulation of the venom.

4. *The location of the bite.* Bites on the extremities are tolerated better than those on the body or head.

5. *The depth of the bite.* If a muscle is deeply penetrated, there is apt to be more tissue destruction. If a vein is injected, the bite may become rapidly fatal. Penetration of both fangs is ordinarily worse than is penetration of only a single fang.

6. *The size of the snake.* The larger the snake the more venom, ordinarily, that is injected. Very young snakes, and the very small species, have considerably less poison and shorter fangs.

7. *The species of snake.* There are eleven species of rattlesnakes in Arizona. The Western diamondback (*Crotalus atrox*) is the most dangerous. It is the largest and is one of the most abundant in the southern half of the state. Other species, such as the Mohave rattlesnake (*Crotalus scutulatus*) and the tiger rattlesnake (*Crotalus tigris*) have a venom that is more toxic. The Sidewinder (*Crotalus cerastes*), while being one of the smallest species, contains a venom of high toxicity. Thus it is also of importance to know the species of rattlesnake, if possible, in evaluating the probable seriousness of the bite.

SYMPTOMS

Symptoms vary widely, depending in part on the above factors and it is difficult at times to differentiate those which are physical in nature from those of fear and anxiety. Indeed, the latter are so important that they may lead to the assumption that the patient has been bitten by a posonous snake when actually the bite was inflicted by a harmless one.

The following is a brief account of the more frequent symptoms which have been observed.

Pain. — While it can be excruciating, there have been cases reported with little or no immediate pain. It can be said, however, that if the bite is painful, it probably is the bite of a venomous snake.

Swelling and discoloration. — There is a very rapid onset of swelling which extends toward the heart. Ecchymosis is present and blood extravasation, which may be quite marked, generally occurs. This swelling may reach from the tip of an extremity to the trunk in approximately 24 hours. It may extend down and along the chest to the iliac crest in the case of a bite on an arm. The amount and rate of advancement of swelling is a good indication of the seriousness of the bite.

Weakness and giddiness. — Various degrees of weakness, occasionally leading to syncope or coma (different from the later coma of fatal cases) can occur and occasionally great excitement, confusion of the mind and extreme nervousness may occur.

Respiratory difficulty. — Respirations may be rapid and shallow or slow and stertorous. The patient may complain of difficulty in breathing for 24 hours or more.

Nausea and vomiting. — This may occur early or later, with epigastric pain and occasionally blood diarrhea.

Circulatory disturbances. — The patient has generally a low blood pressure, a sub-normal temperature and a rapid, thready pulse. Severe anemia may occur later.

Anemia. — This is very common and is generally due to blood loss from tissue extravasation and hemorrhage from the bite and cuts.

Miscellaneous effects. — Necrosis of local tissue may be partially due to treatment (too severe cold, too tight a tourniquet, etc.). Blebs and vesicles commonly occur locally. Numbness and tingling of the face, lips and other parts are common. Double vision and temporary blindness have been reported. *Death is most apt to occur in the second* 24 *hours.* Death generally occurs from respiratory or circulatory failure. It may occur suddenly after 24 to 48 hours, when the local swelling and discoloration has begun to subside, leading to the premature belief that the patient is out of danger. However, the patient is generally out of danger after the first 48 hours.

Complications. — Infection is a very real problem in snake bite and has been the cause of fatalities after 72 hours.

Gas-gangrene and tetanus organisms have been cultured from the mouth of rattlesnakes, and cases of tetanus have been recorded. Rattlesnake bites infrequently leave permanent defects. Finger or limb deformities are frequently aggravated by inexpert treatment.

TREATMENT

(1) *Evaluation of the patient.* — Since some forms of treatment are in themselves hazardous (e.g. serum sickness, tissue refrigeration, improper cutting, etc.) sound medical judgment is

needed to determine the course of treatment in each particular case.

(2) *Keep the patient quiet.* – The use of Demerol has been questioned(9) but its deleterious effects have not been proved in therapeutic doses(10). Barbiturates or other sedatives are indicated. Immobilization of the extremity affected has been shown to slow absorption(11). All investigators support the efficacy of this step.

(3) *Blood transfusions.* – Have the patient *typed and cross-matched* at once for whole blood transfusions(12, 13). Later it may be difficult to get a good "cross-match," because of the hemolysis. A blood test should be run every three hours to determine the presence of hemolysis. Determine the bleeding time for presence of afibrinogenemia.

(4) *Incision and suction with tourniquet.* – Start as soon as possible. Novocaine or Xylocaine may be used in very small quantities, especially on the hand and fingers, to avoid interfering with circulation. Linear (not cruciate) incisions are made along Langer's lines, or longtudinally if in doubt. *They need not be more than ¼ inch long and ⅛ to ¼ inch deep.* Great care should be taken to avoid injury to tendons, nerves or blood vessels. Five to ten incisions are placed along the area of swelling, and occasionally more may be indicated. Suction over these incisions should be maintained continuously for approximately 2 hours, then intermittently over another 2 to 4 hours, depending on the severity of the bite. Cool $MgSO_4$ compresses are applied between suctions. A tourniquet placed quite loosely to obstruct the subcutaneous lymphatic drainage, but not to disturb the venous return and certainly not the arterial inflow, is placed just above the bite, immediately, and is advanced toward the heart as the edema advances.

The method of incision and suction ("cut and suck") was given a scientific basis by Jackson (14) who injected a dog with 4 times the lethal dose of rattlesnake venom. Suction was used for a half hour and the blood serum, extracted during the first ten minutes was injected into another dog. The serum extracted during the next ten minutes was injected into a second dog, and during the third ten minutes, into a third dog. *Seven hours later* suction was applied and the envenomized blood and lymph obtained was injected into a fourth dog. The first and fourth dogs died. The second and third had to be destroyed because of extensive sloughs, and autopsies on these animals revealed the same pathology as that of the dogs which had died. The dog which received the initial 4 M.L.D. recovered with only a necrosis about the site of the bite. Jackson established that venom can be extracted as late as 3 to 7 hours after its injection. The arguments against the use of this method state 1) that the incisions actually open up more lymphatics and thus hasten absorption, 2) that incision is traumatizing and increases the chances of infection and necrosis, 3) that very frequently damage is done by destruction of nerves, blood vessels and tendons, and 4) that the added pain and ensuing increased activity of the patient tends to spread the venom more rapidly. These claims appear adequately refuted by Jackson's classical experiments. In the case of inexpert treatment they are, in part, observable.

(5) *Excision and Suction.* – In comparing the effectiveness of "incision and suction" with that of "excision and suction," Jackson(14) points out, that the tissues surrounding the punctures are heavily contaminated with bacteria as well as impregnated with venom. Adequate debridement should be of advantage in converting such wounds to clean open lesions, free of venom, of necrotic tissue and of contamination with anaerobic pathogens. He concludes that by excision and suction, more venom could be removed locally and that local complications, such as tetanus, gas gangrene and other infections, as well as tissue necrosis, would be diminished.

In one series, Jackson (*op. cit.*) injected 6 M.L.D.'s of venom of the western diamondback rattlesnake into dogs. These dogs were treated for a period of 5 hours, starting suction at thirty minutes. Suction was applied intermittently for a total of 30 minutes in each hour. It was noted that the direction of greatest spread was lengthwise of the extremity in each case.

In a second series, he (*op. cit.*) excised an area 7 cm. (ca 2¾ inches in diameter) and applied suction as before. With excision and suction, two-thirds of the animals survived, whereas with incision and suction, all of them died. He concluded that early *excision* and suction is worthwhile in removing venom from the wound after poisonous snake bite, and that after one hour *incision* and suction should be employed.

It appears that excision and suction has a definite place in treatment, especially in areas where a comparatively large amount of tissue can be removed without danger of injuring vital structures (thigh, abdomen, hips, etc.).

Recent question of the use of incision and suction and excision and suction with tourniquet (15; see also 16) is based largely on an experiment by Leopold *et al.*(11) in which rabbits were injected with uniformly lethal doses of venom. The rabbits were divided into four groups. The rabbits in the first group were returned to their cages for free activity after the injection, and they survived an average of 188 ±18 minutes. The animals of the second group were immobilized on a board, and they survived an average of 517±27 minutes. In the third group, with additional application of a tourniquet only, they survived an average of 511±42 minutes. The fourth group received incisions and suction and survived an average of 375±28 minutes.[2]

In these experiments on rabbits, all of the animals died and within a period of less than 10 hours, whereas human fatalities occur generally after the first 24 hours. Moreover, it is important to realize that incision and tourniquet without anesthesia produces excitation, regardless of immobilization. Also, rabbits are twice as susceptible to cobra venom as are dogs(17) and it takes six times as much venom of the Western diamondback rattlesnake (*C. atrox*), per unit of weight, to kill a rat as it does to kill a rabbit(18). An experimental design such as that of Leopold, *et al.*, which only gives high and uniformly lethal doses of venom to highly susceptible experimental animals, may leave much to be desired.

(6) *Antivenin.* – There is no question that the new antivenin produced by Wyeth, released in 1954, is more potent than their previous antivenin(19, 20, 21). The smaller the patient the more antivenin is required as stated in the Wyeth directions(22). It is to be stressed that skin testing, even with the elaborate method and desentization as recommended in the brochure, is not a guarantee that serious and even near-fatal serum reactions may not occur.

An important thing to remember about antivenin is that it is *not* a remedy to be taken on the assumption of "take it to play safe; no harm done if it isn't needed." Also, when it *is* needed, it should not be taken for granted that a single ampule is the maximum or permissible dose. Frequently 50-100 cc. of antivenin is required.

Caution should be exercised with regard to its local injection, for if the tissue is already quite edematous, the local injection of antivenin will produce severe pain and will further distend the tissues and inhibit circulation. Carefully follow directions for injection as given in the circular(22) accompanying antivenin. At least one ampule of reconsituted antivenin should be injected just in advance of the swelling(10).

It is not to be assumed that there is complete agreement as to the necessity or the desirability of administering antivenin in all cases of rattlesnake poisoning(10, 23, 24, 25). Moreover, it has already been pointed out above that some rattlesnake bites require little or no actual treatment of any kind.

(7) *General Supportive Measures.* – The use of *ACTH* and *Cortisone* are indicated to prevent reaction from the horse serum antivenin in doubtful cases. In the limited experiments thus far performed, there appears to be no effect on the local or general toxicity of the venom itself by *corticosteroids*(26, 27, 28).

The newer *vassopressors,* such as *Levarterenol*[3] are better than Epinephrine (=Adrenalin). Epinephrine tends to speed the heart and increase the circulation more than other pressor drugs.

Recent experiments using *antihistamines* indicate that they have a deleterious effect and should not be used(26,29) even though Benadryl, and others, have been used successfully to reduce severe skin irritation.

Replacement of fluids and electrolytes and the use of enemas (a small amount of venom is released through the bowel) are indicated. Urinalyses should be made.

The use of *tetanus antitoxin* and the use of *whole blood* are indicated. Gas-gangrene antitoxin has been used. The early and continued use of *antibiotics* is especially indicated.

In case of afibrinogenemia (as evidenced by greatly prolonged bleeding and clotting time) *fibrinogen* can be administered. However, as the fibrinogen is depleted with an excess formation of fibrin(6), administered fibrinogen may alleviate bleeding at the risk of more clot formation.

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[2] Standard errors calculated by us from data given by Leopold, et al.(11).

[3] Levarterenol Bitartrate Injection U.S.P. is available in ampules of 4 cc. under the trade name Solution Levophed Bitartrate. The contents of one ampule are added to 1 liter of 5 percent dextrose solution. This mixture is administered by continuous intravenous drip, and the dose is determined by the pressor response obtained. The average dose is 2 to 4 micrograms of levarterenol base per minute(30). The usual precaution against local phlebitis and necrosis should be observed.

(8) *Cryotherapy.* – The use of ligature and cryotherapy (The so-called L-C treatment) is quite adequately covered and properly evaluated, in our opinion, by the warning in the Wyeth instructions(22) against its use.

There have been no adequately controlled scientific studies which support the contention that local tissue destruction from rattlesnake poisoning is lessened by the use of direct ice or ice-water cryotherapy. In fact, the use of prolonged immersion of an extremity directly in a solution of ice and water or in ice(31)[4] is dangerous, as it can cause considerable damage to the devitalized tissues (13, 22, 24, 25, 33, 34).

The distinction should be made between cryotherapy with immersion of a member in ice-water and/or crushed ice for a long period, and the use of ice packs with a cloth between the ice and the patient's tissue. The use of (the latter) conventional "ice packs," have been applied successfully for several hours to several days without damage to the part(21,35,36) and their careful use is recommended as an adjunct to the general treatment above (items 1-7).

Direct application of ice-water or ice to human tissue is acceptable only when rendered strictly as a temporary first aid measure, in which it may reduce local pain and reactions before arrival at a hospital.

SUMMARY OF TREATMENT

- Evaluate and keep patient quiet.
- Blood test, blood type and cross-match.
- Antivenin.
- Incision and suction with tourniquet.
- Excision and suction.
- Ice packs (*avoid* ice-water or other contact-tissue refrigeration).
- General supportive measures.
    - Corticosteroids
    - Vassopressors
    - Fluids and electrolytes
    - Enema
    - Urinalysis
    - Tetanus antitoxin
    - Gas-gangrene antitoxin (evaluate)
    - Antibotics.
    - Fibrinogen (evaluate).
    - Note: antihistamines are contraindicated.

INFORMATION NEEDED

Cases resulting from poisonous reptile bites rarely come to the attention of the physician. In view of the scarcity of good clinical information for such cases in Arizona, the physician is asked (1) to make a special effort to record details concerning the bite, symptomotology, treatment and response of such patients which he may have occasion to observe, and (2) to forward a clinical record to: Office of the Dean, College of Pharmacy, University of Arizona, Tucson, Arizona.

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[4] Stahnke(31) has recently copyrighted an expanded "review" in which will be found those references which he considers important for his personal opinion (he gives no other references) which was originally Crum's(32) in 1906.

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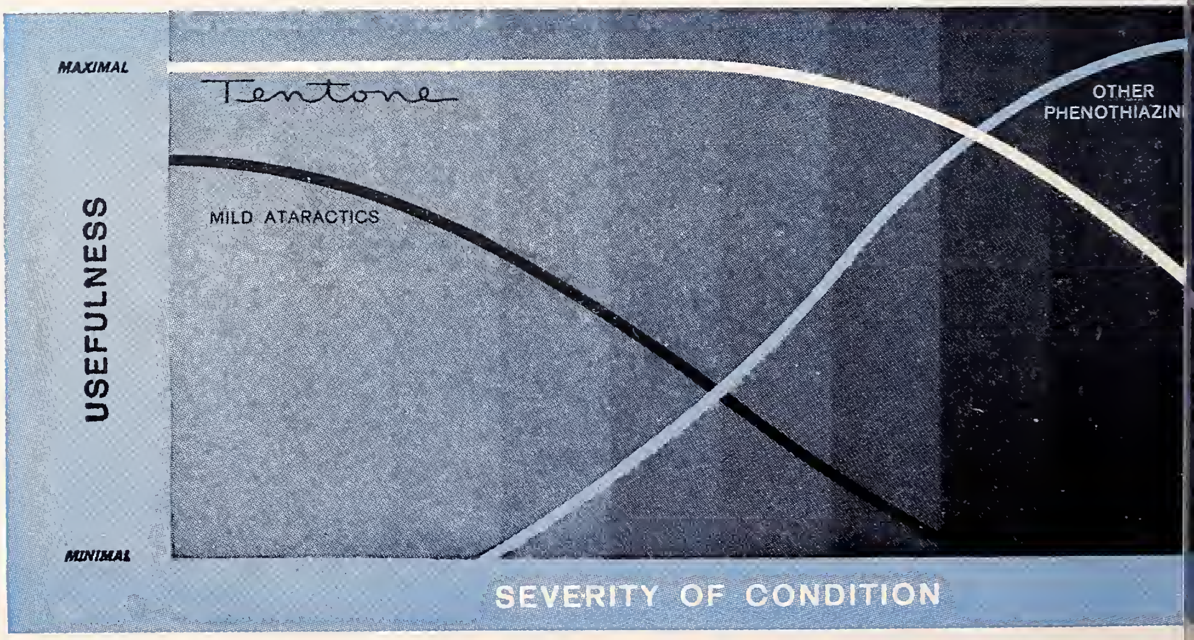

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ARIZONA MEDICINE

Journal of
The ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 16 JULY, 1959 NO. 7

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The **Editor** is always ready, willing, and happy to help in any way possible.

(The Opinions expressed in original contributions do not necessarily express the opinion of the Editorial Board.)

GUEST EDITORIAL

THE PROBLEM OF AGING*

THE ARIZONA Medical Association, along with state medical associations of seven other Western states and the American Medical Association, co-sponsored a Rocky Mountain Regional Conference on Aging at Denver last week. It was one of a series of regional meetings expected to lay the groundwork for a White House Conference on Aging scheduled for Washington in January 1961.

Since everyone will get old if he lives long enough, it is encouraging to see the medical associations tackling the problems of senior citizens. Already 9 per cent of the American people are in the over-65 age group, and medical science has outdated the Biblical life span of "three score years and 10."

The question is how to permit this large and important section of society to contribute to its own and to the nation's welfare. To give meaning and purpose to old age is a task worthy of the best efforts of everyone.

The trouble with a White House Conference is that it may become an excuse for turning the problems of the aged over to the national government. A lot of people seem to think that the senior citizens need nothing but bigger handouts. Actually, they need a hand, not hand-out. They need acceptance by communities that can use their experience and know-how. They don't want to be retired to rocking chairs, with nothing to look forward to but social security checks.

Health and medical care for the aged is only one part of the problem. It can be solved — and great progress is being made in this direction — by voluntary pre-paid health and hospitalization plans which only recently have been made available to anyone over 65 years of age.

Dr. Louis M. Orr, president-elect of the American Medical Association, told the Denver conference that 40 per cent of all people over 65 now are covered by medical programs, and predicted the figure would rise to 60 per cent in another year. The danger, of course, is that voluntary methods will be replaced by such socialistic measures as the Forand bill which would give free medical services to all people on social security. This scheme would boost social security payments to the neighborhood of 11 per cent on small incomes, putting an intolerable burden on the paychecks of working men and women. And it wouldn't solve the medical problems of old people, which can and must be done on a local and community basis with the help of voluntary, pre-paid insurance programs.

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*Reprinted from The Arizona Republic of May 12, 1959.

The medical aspect is only part of the whole problem of the aging. In some sectors of business and industry, a person of 40 or 50 years is deemed too old to work. The resulting loss to the productive capacity of the nation is devastating, to say nothing of the personal tragedy of people who want to lead purposeful and meaningful lives. Yet nothing would be worse for them or for the nation than to turn their problems over to the Washington bureaucracy.

Arizona presumably will be represented at the White House Conference on Aging. This state's delegation should work toward a grass roots solution of the problem, and oppose every effort to allow the expansion of socialistic schemes at the expense of senior citizens.

MEDICAL SCHOOL

THERE HAS been much discussion, conflicting opinions, conflicting statements of supposed fact. One is forced to wonder if the council of the Arizona Medical Association or its delegates reflect the opinion of its membership at large. *Arizona Medicine* is therefore conducting a poll, hoping to obtain a large number of answers on the following questions.

Results of this poll will be published if there are a reasonable number of answers to make it statistically significant.

(1) Are you in favor of a medical school being established in Arizona at the present time?

(2) If not now, when would you encourage its establishment?

(3) If a medical school is established, would you encourage its establishment at the Arizona State University, at the University of Arizona, or in Phoenix under the auspices of the University of Arizona?

LETTERS TO THE EDITOR

Leslie B. Smith, M.D.,
Secretary,
The Arizona Medical Association, Inc.,
826 Security Building,
Phoenix, Arizona.
Dear Doctor Smith:

I WISH to thank you and the council of the association for my membership in the 50-Year Club, for the very nice President's Dinner, and especially for the unexpected and wonderful gift of the 50-year plaque. It is beautiful and a prize to be cherished almost as much as one's diploma. I will obtain one of those plastic covers to keep it new, and place on display.

Altogether we had a very pleasant evening, met some old friends with whom we had worked in other years and places, and the San Marcos is a delightful place for the meeting.

Sincerely yours,
JAMES M. WALSH, M.D.,
Ray, Ariz.

Sir:

IF L.B.S.'s perception of third party medicine compares to his historical knowledge of Caesar and Lenin, perhaps some of his editorial comments should be questioned more closely! It was Nero and not Caesar who fiddled while Rome burned. L.B.S.'s simile is good, though inaccurate as to name. Supposedly, Rome represents medicine as Dr. Smith visualizes it, and Caesar (Nero) represents the third parties. If L.B.S. was thinking of Rome in Caesar's time, he will remember that it was powerful and flourishing. If he was thinking of Rome in Nero's day he remembers that it was decadent and rotting from within. Where does he believe medicine stands today? To me, it is powerful and at the apex of its glory. To me, there is more danger to organized medicine from within than from without. The smug complacency and desire for the status quo which characterizes some of the factions of organized medicine, closely parallels the attitudes of Nero's Rome.

Was it not Bismarck instead of Lenin who wrote that socialized medicine is the keystone of the arch of the socialistic state?

The editorial states that the author of "Third Party Problem" has "largely avoided the issue as based on its merits and has not discussed the question as it relates to the quality of medical care in its role in the furtherance of socialism." One judges the merits of ideas by assessing their moral values. Ethics, as defined by Webster's New Collegiate Dictionary, is "the science of moral values and duties; the study of ideal human character, actions and ends." Since third-party participation in medicine is an established, recognized fact, and since it is legal and ethical, it must have its merits. How would L.B.S. assess its merits otherwise?

Quality of Care

As to the quality of medical care in this country at the present time, under third party arrangements, Dr. Smith should read "The Report of the Commission on Medical Care Plans." After three and one-half years study, this committee, appointed by the board of trustees of the American Medical Association, concludes on pp. 49 (7) "that good medical care is being provided, within the scope of services offered, by the units (of the plans) visited" (18) "The professional training of physicians who provide services in the plans visited appears to compare favorably with that of other physicians in the community." On pp. 52 is the statement, "The quality of medical care has improved for many low income groups now covered by these plans, since a considerable number live under conditions that have made the procurement of medical care a difficult problem."

The outspoken member of the editorial board of *Arizona Medicine* repeatedly refers to "third party control of medicine" and "socialized medicine" and their dire effects upon the United States. If and when we have third party control of medicine, and if and when we have socialized medicine, we will indeed be in a bad way. I was not cognizant of the fact that third parties controlled medicine, and will fight such control as vigorously as anyone else. It seems to me that it is about time certain doctors stop shadow-boxing with the future as they attempt to depict the awful consequences of recognition of the present. If the medical profession does not acknowledge the rapid growth of third parties, it does have its head stuck in the sands of the past.

L.B.S. writes of "brain-washing." It is my impression that this was a repetitious procedure similar to the "hogwash" the medical profession has been given through the various journals in so many articles. If one article, tucked between two more of these "brain-washing" gems can accomplish so much, it is flattering indeed. In this democratic concept we cherish so much, let us hear both sides of the question!

Is it so naive and defeatist to recognize a problem as it exists? Then I am guilty. Failure to recognize this problem should make us ashamed and ready to "stick our heads in the sands." Coercion of some members of the medical profession and the pious platitude of "free choice of physician" do not seem to be a solution to the problem, nor do they appear to be compatible phrases. Since third party medicine is legal and ethical, and since most doctors already are participating in one way or another in its activities, then doctors should have the privilege of choosing the extent of their participation without senseless restrictions from some elements of organized medicine.

Socialism is a repugnant state, yet to deny that it already has a strong grip is foolhardly. Third parties do not control medicine. The article — "The Third Party Problem" — does not imply that it does or should. When it does, Dr. Smith's prediction that the strongest link of the chain of socialistic slavery will have been forged, will be true.

If there is a "little good in all that is bad, and a little bad in all that is good," it is an obligation of the medical profession to nurture all that is good in the existing third party participation. To lump indiscriminately all third party arrangements as bad, is to do a grave injustice to most existing and some proposed third party plans.

D. J. HEIM, M.D.
Tucson

Editor's Note — Who is confused? Caesar — the title of the emperor of Rome from Augustus to Hadrian, or the emperor of the Holy Roman Empire? An emperor or dictator? L.B.S. is accurate. And Lenin must still be given credit in following the works of Marx.

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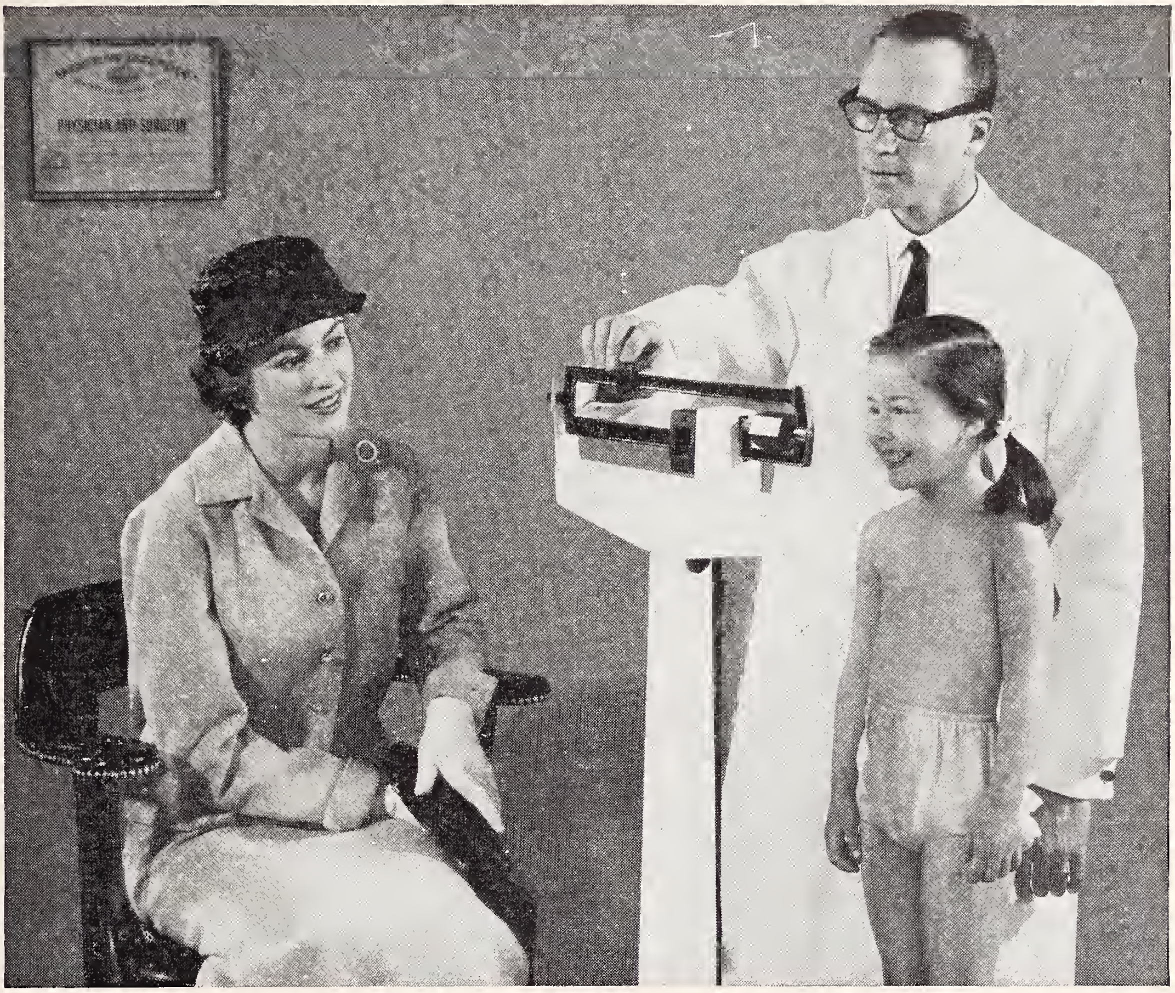

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*Brown, S. S.; Libo, H. W., and Nussbaum, A. H.: Norethandrolone in the Successful Management of Anorexia and "Weight Lag" in Children, Scientific Exhibit presented at the Annual Meeting of the American Academy of Pediatrics, Chicago, Oct. 20-23, 1958.

EDITOR'S NOTES

SURGICAL FORUM[*]

(Continued)

5. *INTESTINAL OBSTRUCTION*

By Dr. Clarence Dennis

ONE MUST distinguish between high and low obstruction, whether it be in the large bowel or small. In discussing obstruction of the small bowel, five of six will be due to external herniae, adhesions or bands. In the greater percentage more than 50 per cent of those due to adhesions or bands will result from previous Gyn operations.

As to the mechanism of the development of the signs and symptoms of obstruction, if an obstruction is caused in the terminal ileum of the dog, there is distension proximally within three to four days, resulting in a diameter of the proximal bowel three to four times that of the distal bowel. The intestinal content will contain about one-half of its material as fluid and the other half as gas. This small intestine is going through repeated small mixing waves every few seconds with a peristaltic wave every three to 10 seconds. Pain is noted upon stretch of the bowel and this becomes particularly evident with peristalsis and the resulting cramp-like pain. With the greater stretch, there is a higher pitch of the bowel tone and the top pitch being noted with the cramps of the patient. This finding, which occurs at every three to 10 minutes, is more reliable than the X-ray findings. Most of these patients will vomit, it being a prominent symptom. There is obstipation with no return even after an enema.

Therefore, the signs and symptoms of small bowel obstruction, if it be simple obstruction are cramping pain, high pitched bowel sounds, vomiting, X-ray changes, marked distension and obstipation. With the development of strangulation, you have the above listed signs with some of the following: There has been a sudden onset with back pain, peritoneal irritation, fever and leucocytosis, possibly pelvic findings and shock. The arteries continue to pump blood in after the veins have been occluded, and one-third of the circulating blood may be found located in an isolated bowel segment.

X-rays will reveal the jejunum to have cross-markings that are quite close together as compared to those noted in the colon. In Rigler's sign, where the obstruction is due to a gallstone, one is likely to note gas in the biliary tree.

Causes of death without treatment are: Strangulation, shock, bacteremia and absorption from the gastro-intestinal tract. In high obstruction, there is a greater salt and water loss, resulting in a uremia. A toxicity is associated with the distension of the small bowel, greater absorption occurring through the mucous membrane which is injured by its decreased blood supply. There is a specific toxin noted from the para-colon bacillus.

Treatment consists of replacement of water and electrolytes. Get blood samples and correct the fluid and electrolyte deficiencies. As a rule of thumb, the patient is frankly dehydrated with a loss of 5 per cent to 6 per cent of the body weight. If one can estimate the amount of vomitus lost, it will have a sodium chloride content equal to about one-half of isotonic saline. Therefore, mix the saline with an equal part of glucose and attempt to balance out what it is felt the patient has lost.

Secondly, empty the intestine by decompression. A Miller-Abbott tube may permit conservative management. Mortality was 7 per cent with this treatment, but you must watch the patient every four hours.

Both Dr. Dennis and Dr. Wangensteen have concluded that early operative management is desirable, as soon as the patient can be hydrated. They attempt to replace about 3 per cent of the body weight with parenteral fluids. Never close the abdomen over a distended intestine. At times using the Miller-Abbott tube as its decompression method, or follow the system of Maddock, using a No. 19 needle, tunneling through the segment of distended bowel and aspirating the contents. Attempt to make the tunnel about 1 cm. in length. No instance of infection from this procedure has been experienced. Or, the previously recorded asceptic decompression of Wangensteen has been found very useful. Instead of the trocar as is so frequently used, simply inserting a tube with a catheter and an insulating piece of soft rubber tubing is recommended. Very frequently the area of decompression is so close to the site of the anastamosis, if an anastamosis and resection must be carried out, that it is unnecessary to do a closure or a suturing of the site of decompression.

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[*] Surgical Forum – Los Angeles – March 1959.

As to preventing the formation of adhesions, there have been attempts to cause them by the insertion of 7 per cent of iodine in alcohol, develop a few adhesions, scrub the area with a steel brush and insert the same solution and develop a few more adhesions. But many adhesions have developed following the use of talc or the various starches. In the case of starches, the adhesions are reabsorbed in two to three months. Washing the gloves in a basin is totally inadequate. Cleaning off the gloves, using a washcloth is recommended as the most satisfactory method.

In large bowel obstruction, that is of the colon and rectum, in two out of three cases there is a carcinoma of the wall. In one of three there is secondary cancer, hernia, volvulus of the sigmoid, or a diverticulitis. Cancer of the large intestine usually presents warning signs for a number of weeks prior to becoming a malignancy. In six out of seven patients, the obstruction is in the left bowel. X-ray findings are useful. The large bowel presents quite a different pattern of muscular activity unless it is low down in the right colon where there is marked distension of the small bowel. Vomiting is not a prominent finding. Fecal vomiting is not characteristic of large bowel obstruction. Fecal vomiting is dependent upon how long the content of the bowel has been present in the intestine. The variable competency of the ileocecal junction make deductions in regard to it totally unreliable. Strangulation of the colon as the result of malignancy is rare.

Death in these cases is usually the result of a thin wall bowel with poor blood supply, resulting eventually in a perforation of the anterior walls of the cecum.

Treatment conissts of parenteral fluids, which may be given at a slower rate than in small bowel obstructions and then a performance of a cecostomy or a transverse colostomy. In a review of Dr. Coller's cases, five of seven patients having cecostomy performed, five of seven died. The risk of a transverse colostomy is considerably less. It is best to encourage doing this transverse colostomy through a transverse incision, parallel to the course of the colon.

Not infrequently an annular carcinoma with a fecalith or foreign body such as a prune seed will develop an obstruction in one direction only and not with the administration of a barium enema. In reveiew of a series, 10 per cent of the patients with incomplete obstruction developed complete obstruction following the administration of a barium enema. A nickel may be used over the umbilicus to identify the area. In general, a transverse colostomy in the right upper quadrant with almost a subcostal incision is preferred. The Maddox technique is used to evacuate gas and permit a ready delivery of the transverse colon. In the presence of a right colon obstruction, it is found simplest to do a right hemicolectomy immediately. If necessary, decompress the cecum with a needle inserted into the cecum through the terminal ileum.

6. A SURGEON LOOKS AT CHEMOTHERAPY FOR CANCER

by Dr. Henry T. Randall

It is felt that of the cancer cases we see, only about 25 per cent are potential cures. This cure rate can be improved somewhat by earlier diagnosis, possibly by a more radical surgery, more likely by the use of chemotherapy and immunology in time. The same type of cancer will vary greatly as it appears in different hosts. There are chemically useful differences between the normal cell and cancer cell in the same patient, making for a certain fallibility of the malignant cell. At present about two-thirds of some cancers in mice can be cured chemically. Of the chemotherapeutic agents, there are the alkylating agents where the reactive group is a nitrogen with a bond to C^2H^4C1 and to a second group of the same type. This must be injected. Or, a group of agents, as TEM, where the reactive factor is a linkage between nitrogen to CH^2 to another CH^2 and back to nitrogen. Both of these react with the nucleic acid. And then there are the methyl sulfo esters, such as Miloran which has a sulfa group connected to oxygen and to methyl groups. Or, tri-ethylene-phosphoramide which seems to be helpful in breast cancer.

The substituted folic acids as Aminopterin and Amithopterin (Methotrextrate) and the substituted purines and pyrimidines are the groups that seem to have effect on the solid tumors in man. Of the substituted purines, there are six mercapto-purines and six chloro-purines, and of the pyrimidines, five fluorouracils.

Azaserine and DON are showing good results in animals.

The results of these chemotherapeutic agents are transient and temporary, but have resulted in the average prolongation of life in leukemia from 4½ to 18½ months, a development of the last six years.

In lymphomas, Cortisone will precipitate brief remissions. In choreo-carcinoma you have a half-way homograft. Therefore, the results are not the same as will be noted in autogenous lesions.

Dr. Creech has strongly encouraged local and organ perfusion.

Separation of cancer cells from the blood has been effectively performed. In a neurofibrosarcoma, as high as 154 cells per cc. have been noted. This test permits a cancer cell count. Patients have been found to be alive and well with no evidence of recurrence, who have circulating cancer cells in their blood.

The administration of chemicals at an ineffective level or the use of surgery will spread the cancer. This same situation can be duplicated by the administration of Cortisone, or by stress.

The mortality at present is the same in a control group as in patients receiving the alkylating agents. At least in studies that have been run for a period of six months.

The local administration of chemicals as with the washing out of wounds, or the irrigation and scrubbing of the area, it seems that irrigation with scrubbing using a sponge would be helpful. Distilled water applied to a wound showed 20 per cent takes if the area was scrubbed. Takes of 52 per cent if the wound was only irrigated with the distilled water. If the wound is irrigated with normal saline solution and scrubbed, there were only 28 per cent takes, which elevated to 72 per cent takes if the wound was merely irrigated with saline and not scrubbed.

In treatment of the peritoneal cavity, the installation of nitrogen mustard resulted in 80 per cent freedom from malignant cells, or the use of radioactive phosphorus, 96 per cent free. These are procedures to be considered.

Scrubbing with normal saline solution does cut down the percentage of takes. Systemic chemotherapeutic agents seem to be of little help. There is a definite difference between cancer and normal cells, and cancer does seem to be a systemic disease with a factor of host immunity.

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References: 1. Charles, C. M.: Geriatrics *2*:110 (March) 1956. 2. Menger, H. C.: Clin. Med. *4*:313 (March) 1957. 3. Shuster, B. H.: M. Clin. North America *40*:1787 (Nov.) 1956.

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Topics of Current Medical Interest

HOSPITAL PATIENT RECORDS AVAILABILITY

Ian M. Chesser, M.D.

ALTHOUGH the opinion varies in many jurisdictions, it has been held quite universally that a patient's record in a hospital is neither the property of the physician nor the patient, and merely resides in the hospital, with the hospital in the position of guardian.

It is true that professional courtesy usually requires that a physician have the permission of another physician who may have had previous records on the patient; but it also applies that under the ethics as proposed by the American Medical Association, no physician shall deny to a colleague the previous records on a patient.

I should like to call your attention to this statement in the publication of the American Medical Association, dated June 7, 1958, entitled: "Principles of Medical Ethics: Opinions and Reports of the Judicial Council," identified as Section 9, Page 50:

"The interest of the patient is paramount in the practice of medicine; and everything that can reasonably and lawfully be done to serve that interest must be done by all physicians who have served or are serving the patient. When a colleague who is presently treating a patient requests records from another physician who has formerly treated the patient, that former physician should promptly make his records available to the attending physician.

"No set rule can be laid down to cover the manner in which the records are to be transmitted to the atending physician. Under some conditions a personal inspection of the records might suffice; under others an oral report of what is contained in the records would be of help; or in other circumstances a summary of the records might be made. In extreme cases a physician might lend his complete record to the attending physician."

The judicial council assumes, of course, the proper authorization for the use of these records has been granted the physician by the patient.

I believe that the point to be made in this discussion is that in all instances, previous records of the patient should be obtained with the permission of the patient — this permission having been given, no physician or hospital could restrict a physician from obtaining such records, since the patient can, by his own permission, waive the privilege of communication that existed between himself and his prior physician.

Solution Suggested

I have long felt that this problem would come to an end if the patient were required to sign a statement on his admission to the hospital, much the same as he does when he applies for an insurance policy, making available to a named physician all records — both present and past — which might be required in the treatment of the present existing condition which required hospitalization.

It has been noted that people outside the profession — such as an attorney — may obtain hospital records for their study simply by obtaining the permission of the patient. It is true that in the face of the objection of the patient's physician, he may simply obtain a subpoena — and so there is very little point in a physician's registering his objection to the release of such records. It is important to note that the point on which this whole matter turns is obtaining the permission of the individual about whom the records were made.

There is one other point which should be indicated: That those records made in the hospital by the nurses and other hospital employes are merely administrative in nature, and it is doubtful that any privilege exists concerning these records. The notes and diagnoses recorded by the physician, however, remain as privileged communications between himself and the patient — and can only be waived by the patient, not by the physician.

It appears that all that is necessary is to have the permission of the patient in order to obtain these records; and that this might be expedited by having this permission incorporated in the admission agreement that the patient signs on being admitted to the hospital.

THE ARIZONA MEDICAL ASSOCIATION, INC.

1958-59 ANNUAL REPORT OF THE PROFESSIONAL BOARD

THE FIRST meeting of the present board, as constituted in personnel, was held in Phoenix on Aug. 10, 1958. At that time, some reorganization of the activities and reassignments was accomplished and it became evident in the literature facing the board at that time that several basic problems projecting into the future, were becoming paramount in importance; primarily, that dealing with the current national trend on the care of the aging and problems of aging. A voluminous file of literature had been received by the board at this meeting and Doctor Lowell Wormley was appointed as the subcommittee chairman on the problems of the aging and the aged.

In the August meeting, the board recommended, in principle, the acceptance of a resolution to establish an Arizona Central Cancer Registry.

Crippled Children's activities on that date embraced information with respect to requests on the part of the Arizona Society for Crippled Children and Adults, seeking assistance from the state medical association in the establishment of a statewide case finding program by appointment of a medical advisory committee. Dealing with the philosophy of such multiple activities requesting multiple advisory boards could snowball into a prohibitive scope of activity on the part of the medical society for any and every organization dealing with health that requests such aid; it was felt that a study of the requirement for crippled children's services and activities of associations dealing with physical disabilities should be surveyed sufficiently to find out where reduplication of effort is being encountered in the state and try then if this board is to recommend advisory committees to such organizations, that reduplication of services be dispensed with, and such advisory committee being able to apply itself in one effort rather than in multiple efforts for any and every organization desiring such advisory service. This activity was tentatively shelved until all information available could be received and then passed on by the board for final recommendations to the state council. It will probably require a year before such tentative survey can be completed and such recommendations can be made.

Tuberculosis

With respect to tuberculosis, it has been noted that difficulty in development of a uniform case finding system for this state has been encountered. In addition to this, some difficulty in control and reporting as well as in diagnostic criteria for tuberculous cases have been encountered in the state, particularly is this so with respect to out-of-state transients who come to Arizona. After considerable discussion on this matter, the board recommended to the council establishment of a policy supported by the state association in cases of suspected active tuberculosis, the physician in charge of the patient submit to the Arizona State Department of Health a report on the chest films certified and signed by qualified radiologists. That the physician submit a report on a series of three gastric washings by a certified laboratory, signed by a certified clinical pathologist, and that such procedures be carried out within 30 days of the request by the state health department. This, from all the discussion, was felt to be important to try and standardize the essential requirements for diagnosis of such disease and aid in clarifying for the state health department such active cases.

Osteopaths

The board passed on an opinion with respect to industrial commission request for aid in establishing relationship between osteopathic and legitimate medical consultations on industrial problems which require medical consultation, and the professional board itself went on record to the council recommending that the industrial commission need establish its own rules and regulations referable to osteopathic consultations. The industrial commission by law has control over its own patients and since acceptance of osteopathic and other branches of the healing art are recognized by the commission, it is felt that it is their problem to clarify any needed consultation among these branches of the healing arts, and it is not in the scope of doctors of medicine, through this board, to regulate such consultation requirements by the industrial commission.

Blue Shield

A second meeting of the board was held on Oct. 12, 1958, in Tucson, Ariz., at the Pioneer Hotel and a major problem referable both to activities of the problems of the aging as well as a request by the state society of pathologists referable to transfer of pre-paid medical services to Blue Shield was considered at that meeting.

Aging

The society of pathologists apparently have requested that the professional board consider a request by them that pre-paid medical services, particularly with respect to laboratory and tissue study services as now pre-paid by Blue Cross should be separated from Blue Cross and transferred to Blue Shield and paid directly to the doctors as practicing physicians.

Doctor Wormley, the subcommittee chairman on problems of aging, had attended a national meeting in Chicago at the request of the board, and he reported on the broadening and increasingly active scope nationally in the field of medicine in the problems of aging. Here again, the professional board has recommended a policy of interest and active investigation, but one of caution in unbridled enthusiasm toward pursuing and setting up all recommendations made by the national movement as applied to this state until complete information referable to the specific problems can be obtained from local county societies as a guide for further action.

At the present time this problem with respect to the pathalogists, etc., is unresolved and it is still being actively pursued, but will have to await some action on the part of pathologist groups before definitive recommendations can be made.

Cancer and Aging

The next meeting of this board was Dec. 7, 1958, in Phoenix, and once again the pre-paid medical services problem was brought up and is still unresolved. Problems of specific recommendations referable to a central cancer registry have already been forwarded to the council and have been accepted and passed on by the council. Geriatrics and the problems of the aging becomes an ever increasing problem with respect to this committee's activities. The voluminous file of literature passing over the desk of the chairman indicates that apparently a nation-wide enthusiastic drive toward manufacturing a new agency is under way, and the board as a group still recommends caution, observation and intelligent consideration of the various aspects of this move that come before it before making any radical change in the state's medical approach toward care of the aging.

Hypnosis

Mental disease problems with respect particularly to hypnosis as they pertain to both the lay literature and to the spectacular in public relations, is being brought out in correspondence to this board. Doctor Gregory has reported on this and the state association has been reminded of the report of the Council on Mental Health, of the AMA, contained in Volume 168, No. 2, of the *Journal of American Medical Association,* dated Sept. 13, 1958, reiterating the stand of the board and of the society referable to propriety in pursuit of hypnosis in medical therapy.

Lax Reporting

There has been a specific deficiency on the part of practicing physicians, members of the society, in reporting communicable disease as required by law. This is again brought to the attention of the members, through recommendation of the board, at the request of the Arizona State Department of Health. It is a requirement of practicing physicians that reportable communicable diseases be reported to the state board of health periodically as indicated in the directive by the state board of health. This should be brought repeatedly to the attention of practicing physicians in Arizona.

Fee Schedules

At this meeting, a further knotty problem is being posed which will be considered in the next year — fee schedules for industrial, health and accident policies, independently of industrial commission activity, will be considered. A specific problem has been posed by the Pima County Medical Society to the board and the problem will deal specifically with non-industrial commission injuries and dependent sickness and accident policies requesting of various local medical groups a commitment on a "reasonable and equitable fee for services rendered." The ethical status of such commitments and the desirability of fostering such program will be considered by this board as meetings continue.

Aging

The board met again on March 1, 1959. The problems of the aging continue to be one of the biggest time consumers of this board's activities and probably will be for a year or two until either a move is well under way, or the entire program has been dropped. The latter possibility seems remote.

Survey

Survey of crippled childrens' facilities in the State of Arizona is being pursued by Doctor Fife, who is now subcommittee chairman on the crippled children's committee, and particularly is this activity important to answer the requests of the various agencies for advisory committees from the medical society as well as a new move which is paralleling and comparable to the problems of the aging, i.e., that on "rehabilitation." There is an ever increasing amount of correspondence coming thorugh the files of the chairman on this board referable to a nation-wide move on rehabilitation service and rehabilitation activities, even to the employment of the physically handicapped, and it would seem that before another year has gone by, the aging and rehabilitation will be totally time-consuming for this board. An attempt to get some preliminary information of the state facilities and the organization of these is being made before the board itself is swamped with further moves, plans and progress along these lines.

Polio Program

On the date of the March 1 meeting, maternal and child health reports indicate the need for correlating the control, practice and recommendations for poliomyelitis vaccine and this is being worked out with the pediatric groups in the state to revitalize the polio innoculation program and to pursue public education with respect to publicity along these lines in order to stabilize and standardize practices and recommendations referable to polio vaccine. This is being implemented by Doctor Semoff through the maternal and child health program.

Medical Education

At this same meeting, one of the functions of this board, i.e., that of medical education and particularly with respect to the seminar program was brought up. In the past, seminars have been given throughout the state, but in the last year or two that they were given, interest did not justify the expenditure of effort and money for value received for the outlying areas of medical practice. For this reason, the board feels that the state annual meeting is the place for the medical education that this board can offer, i.e., the various problems with respect to political and scientific medicine in the state that are brought across the desk of this board during the year should be brought out and emphasized in state meetings so that the various problems confronting the medical society in the state can be expanded and clarified to the various members for both education and improvement of medical practice in the state. To this end, the board is suggesting to the council, consideration of assigning this board the responsibility of year after year in continuity, the setting up of scientific programs for the annual meeting or a close liaison with the scientific program committee in such a way that the various problems that need emphasis to the members of the state society can be brought into proper focus each year at the state meeting. This is a recommendation, and the board itself is willing to accept as much responsibility as the council cares to impose on it toward first of all improving the teaching requirements of the professional board, as well as apprising the society members of the various medical problems that arise from year to year.

State Laboratory

At this same meeting, Doctor Salsbury, head of the state department of health, informed the board that a bill presented to the state legislature requesting monetary appropriations for a state laboratory in Tucson was having difficulty in passing. Doctor Salsbury pointed up the value of such a laboratory in Tucson for the future and recommended that Pima County members of the society investigate their desires referable to such a state laboratory, and if it is desired by the Pima County members, then influence should be exerted upon the legislators to have such a program passed adequately to justify the laboratory being set up in Tucson as a branch of the central state health laboratory. Once again at this meeting, further lay programs aimed at health activities were considered, i.e., the National Foundation for Poliomyelitis and its branching out into arthritis and other disease groups. Doctor Semoff is to report on this in coming meetings and recommendations from this board will be forthcoming as further information is obtained.

Conclusion

In conclusion, in the past year this board has been very active from a standpoint of work, and has been rather sterile insofar as specific accomplishments are concerned, however, the broad base of information that has been hassled over in the past year will lead to clearing up many of the problems that have been hanging fire over the past two or three years, and it is felt in the next year specific recommendations to clarify most of this business from the board to the council will be accomplished.

Respectfully submitted,
JOHN R. SCHWARTZMANN, M.D.,
Chairman,
Professional Board

1958-59 ANNUAL REPORT OF THE PROFESSIONAL LIABILITY INSURANCE INVESTIGATING COMMITTEE

NO SIGNIFICANT new progress has been made during the past year.

The committee reviewed a detailed proposal made by the National-Heard Insurance Agency offering group malpractice coverage through Lloyd's of London. It was concluded that this proposal was not one which met the numerous requirements felt to be essential by the committee.

As stated in our last report, the committee feels that the trend nation-wide is for increased claims, judgments and premium rates; that an active group malpractice plan which includes a vigorous claims prevention program offers the best protection against these adverse trends and the best outlook for premium reduction based on a favorable experience.

Currently no suitable group proposal is available which could be offered at a premium that would lead us to believe that it would have wide-spread adoption among the membership.

Respectfully submitted,
HOWARD C. LAWRENCE, M.D.,
Chairman,
Professional Liability Insurance
Investigating Committee

1958-59 ANNUAL REPORT OF THE HISTORY AND OBITUARIES COMMITTEE

IT IS RECOMMENDED that the collection of medical historical material, of the late Orville Harry Brown, M.D., of Phoenix, be properly bound. The committee has sorted, pasted, and alphabetized the 1,900-odd items which Doctor Brown collected. We cherish the wish that this will be the first document in a projected archives of the history of medicine in the State of Arizona.

It is further recommended that a prize of $50 be set up as an award for essays, or other historical writings on medical history in our fair state. This could be offered to the students in the department of history who are in a college or university in Arizona. This might stimulate a certain amount of interest among the professional historians in the state who would therefore add further material to this projected, medical historical archive.

These recommendations may be the obituary of the present committee on history and obituarics. The committee is unanimous in its belief that some consistence in recording Arizona medical history has been too long delayed.

Respectfully submitted,
JOHN W. KENNEDY, M.D.,
Chairman,
History and Obituaries Committee

1958-59 ANNUAL REPORT OF THE MEDICARE ADJUDICATION COMMITTEE

YOUR MEDICARE adjudication committee has met solely to consider problems of charges made prior to the curtailment of the program by congress. Opinions have been reached at these sessions, not always to the satisfaction of the physicians involved, but only after careful and mature consideration of all the factors involved.

The committee recommended to council that the present contract be extended for another year as a means of providing care to dependents whose sponsor is overseas.

It is not anticipated that the committee will be very active in the future inasmuch as the curtailment of the program removed most of the problems which required action in the past.

Respectfully submitted,
PAUL B. JARRETT, M.D.,
Chairman,
Medicare Adjudication Committee

FEE AND CONTRACTUAL MEDICINE COMMITTEE

MEETING OF the fee and contractual medicine committee of The Arizona Medical Association, Inc., held in Phoenix, Ariz., Monday, April 27, 1959, convened at 8 p.m., Hayes W. Caldwell, M.D., chairman, presiding.

Roll Call

Present:
Drs. Caldwell, Hayes W., chairman
Present: Drs. Caldwell, Hayes W., chairman
Edel, Frank W.
Findlay, Francis M.
Jarrett, Paul B.
O'Hare, James E.
Smith, Leslie B., secretary
Tuveson, Leo L.
Excused: Drs. Beaton, Lindsay E.
Manning, W. R., president
Steen, William B.
Guests: Drs. Fisher, Seymour, manager, VA Hospital, Phoenix
Sprague, Lavern D., Tucson

VA Schedule of Fees – Medical Services – Outpatients

The order of business was changed due to the presence of Doctor Fisher, representing the VA hospital, and question of fee schedule for the veterans' administration discussed. Doctor Fisher presented the proposed fee schedule M-1, a copy of which is placed on file. Considerable discussion by all members present, including the guests, followed.

It was moved, seconded and unanimously carried that we go on record as rejecting the schedule as presented and that we recommend to council that a plan be formulated based on the unit value of 500 for medicine and 475 for surgery.

AMA Commission On Medical Care Plans

The next order of business was the AMA Commission on Medical Care Plans report relative to free choice of physician and closed panel systems. Due discussion ensued.

It was moved, seconded and unanimously carried that we re-affirm our previous stand that we are opposed to any system of the practice of medicine which denies the patient a reasonable free choice of physicians.

Pima County Medical Society – Hughes Aircraft – Insurance Program

The next order of business was the Pima County Medical Society – Hughes Aircraft insurance plan.

It was moved, seconded and unanimously carried that we again go on record as accepting their principle of the California schedule with a factor of 5 for the purpose outlined.

Industrial Commission Fee Schedule

It was stated by the chairman that to date we had not received any further communication from the industrial commission.

Doctor Tuveson discussed the point of properly coding doctor's request for payment and stressed that all the doctors in the state be requested to properly code their statements. It was the general consensus that we should again try to bargain with them relative to the desires of the various specialty groups after such time as the industrial commission reports to us on their experience as they are now operating.

It was also stated that this committee could find no objective evidence of good faith so far on the part of the industrial commission.

Meeting adjourned at 10:15 p.m.

LESLIE B. SMITH, M.D.,
Secretary

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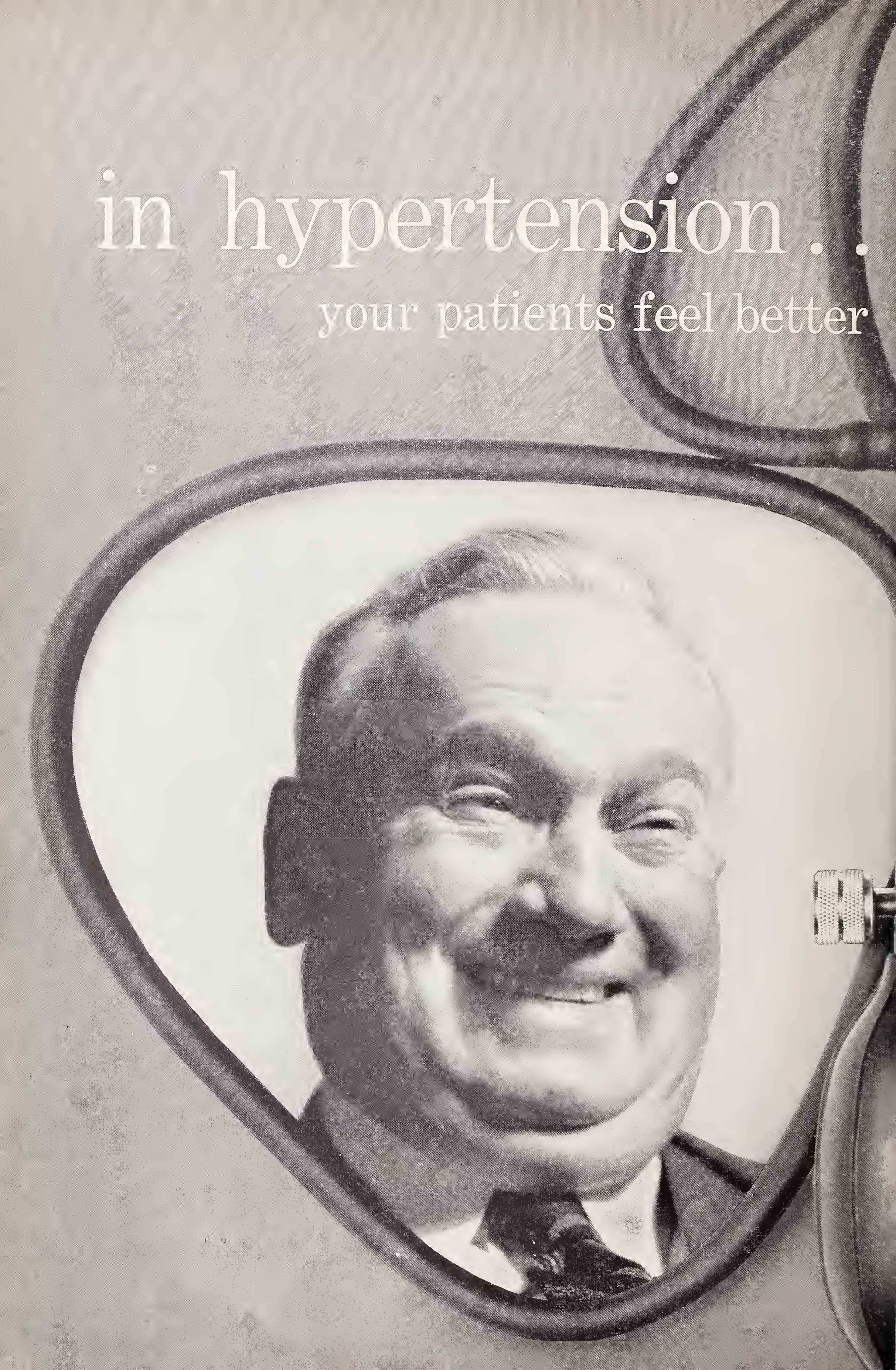
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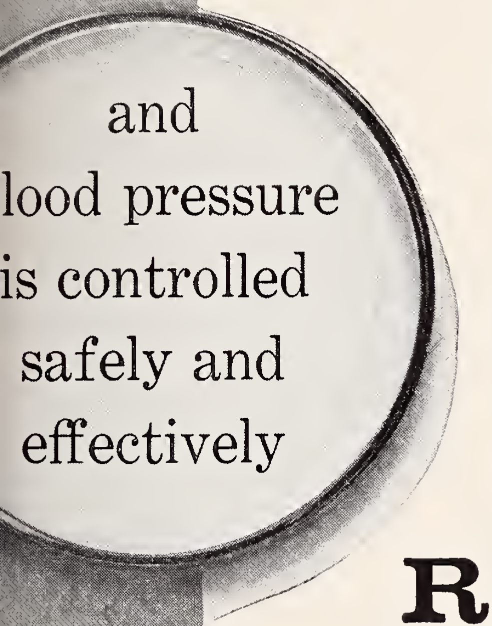

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ARIZONA POISONING CONTROL INFORMATION CENTER

MOTH BALL POISONING IN CHILDREN

DESPITE THE odor and size of moth balls, children, especially under the age of five, appear to be attracted to them. The Arizona Hospital Poisoning Control Treatment Centers have reported several cases of ingestion of moth balls by these toddlers. Parents should be warned to keep these tempting, shiny, white objects out of reach of their children.

The most common constituent of moth balls is naphthalene. The toxicity of this chemical agent is not generally appreciated. It has only been in the recent past that case histories in this country have been reported revealing the potential danger of naphthalene moth balls. In fact, as late as 1948, certain standard textbooks on pediatrics stated that, since naphthalene in moth balls is not soluble, it passes through the digestive tract without absorption and is harmless. Since 1949, several reports in the literature describe severe toxic symptoms resulting from the ingestion of naphthalene moth balls. Although naphthalene is insoluble in water, absorption from the gastrointestinal tract does occur; apparently, the high vapor pressure of this compound facilitates absorpiton[1]. The toxic dose is not known, but as little as one naphthalene moth ball (0.5 Gm.) has produced toxic symptoms. In some cases, children have tolerated larger amounts without ill effects; however, this is probably related to varying degrees of absorption.[1], [2].

Acute hemolytic anemia is the most serious effect that may follow ingestion of naphthalene moth balls. Naphthalene itself is not hemolytic, either when injected directly into the blood stream or when added to a suspension of erythrocytes. There is evidence to suggest that the toxic metabolites of naphthalene, primarily alpha naphthol, are responsible for the hemolytic effects.[3],[4] When acute intravascular hemolysis occurs, it usually begins within three to five days after ingestion and is accompanied by anemia, pallor, leucocytosis, tachypnea, hemoglobinuria, and jaundice. The urine is dark or port wine in color, and, as a rule, free of red blood cells. Renal tubular blockade and acute renal failure may follow the acute hemolytic crisis. Heinz bodies in the red blood cells are found before the hemolytic process becomes evident and are, therefore, of prognostic value in determining in which patients hemolysis may develop.[1]

Other symptoms associated with acute naphthalene intoxication from ingestion of moth balls include abdominal cramps with nausea, vomiting, and diarrhea. These symptoms appear in one to two days following ingestion.

Another potential danger from naphthalene moth balls should be noted. A number of cases involving infants have been reported in which acute hemolytic anemia accompanied naphthalene intoxication as a result of absorption of this compound from diapers which had been stored in naphthalene moth balls. The oil employed on the skin of the babies was believed to facilitate absorption of the naphthalene.[4],[5]

Treatment of acute poisoning from naphthalene is primarily supportive. Replacement of the hemolyzed blood by whole blood or packed red blood cells is of primary importance. Corticosteroids and corticotropin appear to have been beneficial in a few cases of naphthalene hemolysis.[1],[6] To allay gastrointestinal distress, demulcents such as milk, egg white, and gelatin are useful, but oils should be avoided, because they may promote absorption of the naphthalene.[6]

In the event that a child swallows a moth ball, the preferred method for removal is induced emesis, since moth balls are too large to pass through a gastric lavage tube. *In vitro* studies[7], employing a modified USP XV Tablet Disintegration Test[8] in the presence of simulated gastric fluid or simulated intestinal fluid for periods as long as 24 hours, resulted in little disintegration of naphthalene or paradichlorobenzene moth balls. However, on the basis of differences in the weight of the moth balls before and after the tests, it was noted that a small proportion of each moth ball dissolved in the simulated digestive fluids. Following emesis, a saline cathartic such as sodium sulfate in water should be administered.[6]

Paradichlorobenzene is also used in moth balls; however, it is considered to be less toxic than naphthalene. Irritation of the eyes and nose follow inhalation of high concentrations of this compound, but no acute human toxicity has resulted from ingestion of paradichlorobenzene[9].

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STATISTICS OF 126 POISONING CASES IN ARIZONA DURING APRIL 1959

	Per Cent	*Number*
Age:		
Under five years	70.6	89
Six to 15 years	4.8	6
16 to 30 years	11.9	15
31 to 45 years	7.1	9
Over 45 years	2.4	3
Not reported	3.2	4
Nature of Incident:		
Accidental	81.0	102
Intentional	19.0	24
Time of Day:		
Between 6 a.m. and noon	19.8	25
Between noon and 6 p.m.	34.9	44
Between 6 p.m. and midnight	26.2	33
Between midnight and 6 a.m.	3.2	4
Not reported	15.9	20
Outcome:		
Recovery	100.0	126
Fatal	0.0	0

Causative Agents:	*Per Cent*	*Number*
Internal Medicines		
Aspirin	23.8	30
Other analgesics	4.0	5
Barbiturates	14.3	18
Antihistamines	4.8	6
Laxatives	4.8	6
Cough medicine	0.8	1
Tranquilizers	4.0	5
Others	5.6	7
Subtotal	62.1	78
External Medicines		
Liniment	0.8	1
Antiseptics	0.8	1
Others	0.0	0
Subtotal	1.6	2
Household Preparations		
Soaps, detergents, etc.	0.8	1
Disinfectants	1.6	2
Bleach	4.0	5
Lye, corrosives, drain cleaners	1.6	2
Furniture and floor polish	0.0	0
Subtotal	8.0	10
Petroleum Distillates		
Kerosene	4.0	5
Gasoline	3.2	4
Others (turpentine)	0.8	1
Subtotal	8.0	10
Cosmetics	0.8	1
Pesticides		
Insecticides (1 moth balls)	2.4	3
Rodenticides	0.0	0
Others	0.0	0
Subtotal	2.4	3
Paints, Varnishes, Solvents, etc. (linseed oil)	0.8	1
Plants (castor beans, oleanders)	4.8	6
Miscellaneous (weed killer, matches, glue, Rit dye, dog cleaners, etc.)	8.7	17
Unspecified	3.2	4
TOTAL	100.0	126

WILLIS R. BREWER, Ph.D.
Dean, College of Pharmacy,
The University of Arizona

ALBERT L. PICCHIONI, Ph.D.
Pharmacologist and Director
Arizona Poisoning Control Program

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PARLIAMENTARY PROCEDURE*

THE MEDICAL MEETING

"What Do I Want To Do?"

- *Introduce business?*
  - Main motion (MM)
- *Kill a motion?*
  - Postpone indefinitely (S7)
- *Modify or change?*
  - Amend (S6)
  - Commit or refer (S5)
- *Let a few study a matter?*
  - Commit (S5)
- *Defer action?*
  - Postpone to definite time (S4)
  - Make a special order
  - Table (S1)
  - Reconsider and enter in the minutes (U2)
- *Fix a time to attend to a matter?*
  - Postpone to definite time (S4)
  - Make a general or special order
- *Stop or limit debate?*
  - Previous question (S2)
  - Modify debate (S3)
- *Suppress the question?*
  - Object to consideration (I8)
  - Postpone indefinitely (S7)
  - Table (suppresses temporarily) (S1)
- *Object to a decision of the chair?*
  - Appeal (I1)
- *Do something contrary to rules?*
  - Suspend the rules (I3)
- *Do something contrary to by-laws?*
  - Change the by-laws (MM)
- *Correct procedure?*
  - Rise to a point of order (I4)
- *Make a request?*
  - Rise to a question of privilege (P4)
  - Rise to a parliamentary inquiry (I5)
  - Rise to a point of information (I5)
- *Determine the correctness of an announced vote?*
  - Call for a division of the assembly (I7)
- *Consider a question a second time?*
  - Take from the table (U1)
  - Reconsider (U2)
  - Rescind (U3)
- *Bring the question again before the assembly?*
  - Take from the table (U1)
  - Take up a postponed question before its proper time
  - Discharge a committee
  - Reconsider (U2)
  - Reconsider and enter on the minutes (U2)
  - Rescind (U3)
  - Renew
- *Repeal an action?*
  - Reconsider (U2)
  - Rescind (U3)
- *Prevent final action in an unrepresentative meeting?*
  - Reconsider and enter on the minutes (U2)

DEFINITIONS

A main motion is a statement by a member that the organization should take certain action on a matter or express its opinion on a subject.

A subsidiary motion is a motion to modify, delay, or otherwise dispose of a pending motion. The subsidiary motion supercedes the other motion for the time being and must be acted upon before action can be taken on the primary motion. Each subsidiary motion has a definite rank. When a given subsidiary motion is made, any one above it is in order while any one below it is out of order. The subsidiary motions are in order of rank: (1) To table, (2) To move the previous question, (3) To modify debate, (4) To postpone to a definite time, (5) To commit or refer, (6) To amend and, (7) To postpone indefinitely.

A privilege motion has nothing to do with the pending question, but is of such importance that it must be acted upon at once. They, too, have a definite rank as follows: (1) To fix a time at which to adjourn, (2) To adjourn, (3) To recess, (4) To rise to a question of privilege, (5) To call for orders of the day.

An incidental motion is one that arises out of a pending question and must be decided upon before that is settled; or of a question that has just been pending and must be decided upon before any other business is taken up; or that relates to the business of the assembly. They have no rank, and are in order whenever they are incidental to the business of the assembly, regardless of the rank of the pending motions. They are to appeal from a decision of the chair, to withdraw a motion, to suspend the rules, to rise to a point of order, to make a parliamentary inquiry, to request information, to divide the question, to divide the assembly, to object to consideration of a question, to close

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*From an exhibit, What Do I Want to Do in the Medical Meeting? G. F. Schmitt, M.D., F.A.C.P., Registered Parliamentarian, 30 S. E. 8th St., Miami, Fla.

CHART OF PARLIAMENTARY PROCEDURES

No.	Motion	May interrupt speaker?	Must be recognized?	Must be seconded?	Debatable?	Amendable?	Vote Required?	Renewable?	Reconsiderable?	May apply to following motion?	Motions that apply to it?	Yields to?	Roberts Par.	Pg.
	PRIVILEGED (in order of rank)													
P 1	To fix time to which to adjourn	No	Yes	Yes	No	Yes	Majority	Yes - but for different time	Yes	None	S 6 U 2	None	59	16
P 2	To adjourn	No	Yes	Yes	No	No	Majority	Yes	No	None	None	P 1	60	17
P 3	To recess	No	Yes	Yes	No	Yes	Majority	Yes	No	None	None	P 1, 2	64	18
P 4	Question of privilege	Yes	No	No	No - but resulting motion is	No	Decided by chair	Yes	No	None	None	P 1, 2, 3	66	19
P 5	Call for order of the day	Yes	No	No	No	No	None	Yes	No	Any order	None - except to postpone orders	P 1, 2, 3, 4,	68	20
	SUBSIDIARY (in order of rank)													
S 1	To table	No	Yes	Yes	No	No	Majority	Yes	No	P 4, 5 - MM I 1 - U 2	None	P 1, 2, 3, 4, 5	104	28
S 2	To move previous question	No	Yes	Yes	No	No	2/3	Yes	Yes	Any debatable motion	U 2	P 1, 2, 3, 4, 5 S 1 I 1-11	111	29
S 3	To modify debate	No	Yes	Yes	No	Yes	2/3	Yes if lost	Yes	Any debatable motion	U 2	P 1, 2. 3. 4, 5 S 1, 2 I 1-11	118	30
S 4	To postpone to a definite time	No	Yes	Yes	Yes Limited	Yes	Majority - if special order 2/3	Yes	Yes	P 4 MM U 2	S 2, 3, 6 U 2	P 1, 2, 3, 4, 5 S 1, 2, 3 I 1-11		
S 5	To commit or refer	No	Yes	Yes	Yes Limited	Yes	Majority	Yes	Yes	P 4 MM	S 2, 3, 6 U 2	P 1, 2, 3, 4, 5 S 1, 2, 3, 4 I 1-11	125	32
S 6	To amend	No	Yes	Yes	Yes	Yes	Majority	No	Yes	P 1, 3 S 3, 4, 5 MM - I 6, 9	S 3, 6 U 2	P 1, 2, 3, 4, 5 S 1, 2, 3, 4, 5 I 1-11	134	33
S 7	To postpone indefinitely	No	Yes	Yes	Yes	No	Majority	No	Yes - only by "aye" side	P 4, 5 MM	S 2, 3 U 2 (aye side only)	P 1, 2, 3, 4, 5 S 1, 2, 3, 4, 5, 6 I 1-11	152	34
MM	MAIN MOTION	No	Yes	Yes	Yes	Yes	Majority	Not at same session	Yes	None	All	All	51	11
	INCIDENTAL (no rank)													
I 1	To Appeal from Decision of Chair	Yes	No	Yes	Certain Appeals	No	Majority	No	Yes	Any decision by chair	S 1, 2, 3	P 1, 2, 3, 4, 5 S 1	81	21
I 2	To withdraw a motion	No	No	No	No	No	Majority	Yes	Negative vote only	Any motion	U 2	P 1, 2, 3, 4, 5 I 1	100	27
I 3	To suspend the rules	No	Yes	Yes	No	No	2/3	No - except by unanimous consent	No	Any motion	None	P 1, 2, 3, 4 S 1	83	22
I 4	Point of order	Yes	No	No	No	No	Chair decides	No	No	Any motion or act	None	P 1, 2, 3, 4, 5 S 1	78	21
I 5	To make a Parliamentary inquiry To request information	Yes If urgent	No	No	No	No		No	No	Any motion	None	P 1, 2, 3, 4, 5	98	27
I 6	To divide the question	No	Yes	No	No	Yes as to proper division	Majority	Yes	No	MM S 6	S 6	P 1, 2, 3, 4, 5 S 1, 2, 3. 4, 5 I 1-11	89	24

I 7	To divide the assembly	No	No	No	No	No	Majority to order a count	Yes	No	Any motion	None		95	25
I 8	Objection to consideration	Yes	No	No	No	No	2/3	No	Negative vote only	P 4 MM	U 2	P 1, 2, 3, 4, 5 S 1-11	87	23
I 9	To close nomination	No	Yes	Yes	No	Yes time only	2/3	Yes if lost	No		None	P 1, 2, 3, 4, 5	96	26
I 10	To consider seriatum	No	Yes	Yes	No	No	Majority	No	No	MM	None	P 1, 2, 3, 4, 5	92	24
I 11	To read a paper	No	Yes	Yes	No	No	Majority	No	Yes		None	P 1, 2, 3, 4, 5 I 1-9	101	27
	UNCLASSIFIED (no rank)													
U 1	To take from the table	No	Yes	Yes	No	No	Majority	Yes	No	Only to tabled motion	None	P 1, 2, 3, 4, 5 I 1-11	154	35
U 2	To reconsider	Yes for entry only	No	Yes	Yes If original motion is debatable	No	Majority	No - unless by general consent	No	Any motion except P 2, 3, 5 - S 1 I 3 - U 1, 2	S 1, 2, 3, 4	P 1, 2, 3, 4, 5 S 1-11	156	36
U 3	To rescind	No	Yes	Yes	Yes	Yes	2/3 if previous notice - majority	Not at same session	Yes negative vote No affirmative vote	Any motion	S 1-7	P 1, 2, 3, 4, 5	169	37
U 4	To ratify	No	Yes	Yes	Yes	Yes	Majority	No	Yes	Any motion	All	P 1, 2, 3, 4, 5 I 1-11	173	39

nominations, to consider seriatum, to read a paper.

Certain motions do not fall into any of the above groups and are, therefore, all called unclassified motions. These are to take from the table, to reconsider, to rescind, and to ratify.

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THE MEDICAL EDUCATION SITUATION*

EXTENSION OF REMARKS
of
HON. CLARK W. THOMPSON
of Texas
in the house of representatives
Thursday, April 23, 1958

MR. THOMPSON of Texas. Mr. Speaker, I am interested in the medical education situation in the United States, particularly because the University of Texas Medical School is in Galveston, my hometown. With no little concern I have noted in recent months that the medical profession has been under attack in several areas of the press. As a result, I conferred with Dr. John Truslow, director of the Texas University Medical School, and then prepared seven questions dealing with medical education throughout the country, with a view to ascertaining whether sufficient qualified doctors are being produced to meet the needs of our rapidly growing population. I submitted these questions to Dr. F. J. L. Blasingame, of Wharton, Tex., an old friend and constituent of mine who went to Chicago a year ago to assume the responsibilities as executive vice president of the American Medical Association. I have complete confidence in Dr. Blassingame and his answers to the questions I submitted are very gratifying to me.

I was pleased to learn that since World War II there has been an increase in approved medical schools; that there is a substantial increase in medical students; and that, contrary to certain reports, the American Medical Association exercises no control over the number of students admitted to medical schools. There is much other valuable information in Dr. Blasingame's reply and I believe it will do much to eliminate certain misconceptions about the medical profession. Under leave previously granted, I inserted my letter to Dr. Blasingame and his reply:

CONGRESS OF THE UNITED STATES,
HOUSE OF REPRESENTATIVES,
Washington, D. C., March 9, 1959.

F. J. L. Blassingame, M.D.,
Executive Vice President,
American Medical Association,
Chicago, Ill.

Dear Dr. Blasingame:

My attention has been called to a number of bills introduced in the 86th congress affecting directly, or indirectly, the medical profession.

As a result, I wish to obtain certain information on the present supply of doctors in the United States and to ascertain as far as possible the prospects for an adequate supply of physicians to meet the needs of our growing population.

So I am calling on you, not only as executive vice president of the American Medical Association, but as my old friend and my loyal constituent to supply me with the information. On a separate sheet, I am submitting questions that occur to me in this connection. I know you can provide the facts; facts that should be made known to congress before action is taken to consider legislation affecting the medical profession.

I am writing this after a conference with our mutual friend, Dr. John Truslow, head of the University of Texas medical branch in Galveston, who called on me today.

I will appreciate your answering these questions and will further appreciate any other information you might give me that is relevant.

I want to say that I think you did a courageous thing in sacrificing your substantial private practice in Wharton to take over the direction of the AMA. I wish you great success.

Dr. Truslow joins me in sending you our best wishes,

Sincerely yours,
CLARK W. THOMPSON

AMERICAN MEDICAL ASSOCIATION
Chicago, Ill., April 16, 1959.

Hon. Clark W. Thompson,
House Office Building,
Washington, D. C.

Dear Congressman Thompson:

Thank you for your recent letter and your interest in medical education.

It is indeed a pleasure to bring you an up-to-date report on the status of medical education in the United States. As you know, I am proud of the accomplishments of our medical schools and have great faith in their ability to train enough physicians to meet the needs of our growing population.

---

*Reprinted from the Congressional Record, 86th Congress, first session.

You asked seven important questions about the medical education picture. Let me answer them one by one.

First, has the number of physicians graduated from approved medical schools kept pace with the growth of the nation's population? Over the long haul, the increase in medical graduates is much greater proportionately than is the increase in the population. From 1920 to 1958, the percentage of increase in medical graduates from approved schools was 125 per cent, compared with a 64 per cent increase in population. In the past 20 years, the percentage figures are fairly comparable: 32.1- per cent increase for medical graduates; 33.4- per cent increase for population.

The future, I believe, looks bright. Each year, for the past 11 years, the number of students enrolled in approved medical schools has increased. This boost in enrollment amounts to 29.6 per cent (from 22,739 to 29,473).

Your second question was whether medical schools seek to restrict the number of medical students. Two factors make it necessary for a school to establish an arbitrary top enrollment figure: Facilities and budgetary funds available to operate the school. Each school faculty determines the number of students who can have a sound education with the faculty personnel and the facilities available to the school.

Medical education is a graduate educational experience following the completion of the regular college course, and because of the subject matter covered requires individual and small group instruction. To turn out well-trained, highly-qualified physicians the school requires a large faculty of skilled educators, plus sufficient teaching and research laboratories, hospital beds and clinical patients. The number of students that can be taught must be necessarily restricted to fit the facilities so that the emphasis can be on quality of the graduate rather than on the quality of students.

Third, you asked: What is the ratio between applicants to medical schools and those accepted? The answer is 1.97 (15,791 applicants for first year medical school to 8,030 places available). This ratio has remained about the same for the past five years.

Incidentally, a common confusion that arises in discussing applicants to student ratio is mistaking applicants for people (applicants). Each person applies, on the average, to four medical schools. Thus, for the 1957-58 academic year, the 15,791 applicants filed a total of 60,946 applications.

Next, you asked if it is true that only students with an A college academic record are accepted into medical school. That has never been true. About one-sixth of the entering medical students for the whole country have A college records; about two-thirds have B records and about one-sixth have C records.

Your fifth question was: Is the number of medical schools increasing in the United States? In 1944, there were 77 approved medical schools, including eight two-year schools from which students had to complete their final two years of medical education in any of the 69 four-year schools. In 1958, there were 85 approved medical schools. Eighty-one are four-year schools; only four two-year schools.

Two other schools are under development. As a step toward still further expansion of medical school facilities, the American Medical Association last year urged "institutions of higher education where medical education has not been undertaken in the past to give serious consideration to the development of opportunities in the field."

Sixth. Has the American Medical Association anything to do with the number of enrollments in medical schools? Enrollments are strictly determined by each individual medical school. Neither the universities nor their medical schools would permit an intrusion into their academic freedom by a national professional association.

Your final question asked whether I think it is necessary for federal funds to be provided for medical schools. The medical profession welcomes one-time federal grants for medical school construction and renovation as well as federal grants for basic research. The profession has been opposed to continuing federal aid for operating expenses because of the potentialities therein for federal control.

I should like to point out that the National Fund for Medical Education, which raises funds from industrial sources, and the American Medical Education Foundation, which raises funds from the medical profession, have made grants in excess of $10 million to medical education over the past eight years.

I hope this information will aid you in analyzing bills introduced in the 86th congress which pertain to the training of physicians. As further background, I am sending along a copy of the most recent annual report prepared by our council on medical education and hospitals, which was published in the *Journal of the American Medical Association,* Nov. 15, 1958. It provides additional data that you might find useful.

I am happy that you wrote me after conferring with our mutual friend, Dr. John Truslow. If I can provide any additional information, please make your wishes known.

Sincerely yours,
F. J. L. BLASINGAME, M.D.

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AMA OFFICIAL OFFERS POSITIVE PROGRAM FOR AGED

DR. LOUIS M. ORR, Orlando, Fla., president of the American Medical Association, offered a six-point program to "break the chains of misconceptions" about the nation's aging population.

Speaking before the Rocky Mountain conference to study the problems of the aged, Dr. Orr offered these positive views:

"1. A person at 65 has before him years of creativity and activity, provided he is given the opportunity to remain a productive member of society.

"2. The vast majority of our 15 million old people enjoy reasonably good health, and they are not all in dire need of medical care.

"3. The needs of our senior citizens are far more numerous than just health needs. They include occupational, economic, social and psychological needs.

"4. The physicians of America have taken an active interest in the needs of the aged. Our concern is such that a dynamic program has been set into motion to help provide low-cost health insurance for those who have been financially short-changed by our society.

"5. Medicine's program will meet the health needs of the aged while preserving the dignity and freedom of the individual. It has a flexibility that no government-run program could provide, and our plan will not throw the elderly into a state of financial dependence on their fellow citizens or on tax funds.

"6. The fact that more people are living longer is one of the greatest sociological and scientific revolutions. We are still in the midst of this change, but we do not intend to stand motionless while history passes us by. Our effectiveness in meeting the challenges of this new world of aging will depend ultimately on our understanding of its magnitude."

Understanding Needed

Dr. Orr, who spoke before 350 representatives of medicine, women's organizations, churches, labor, industry and government, said that in order "to liberate the aged, to restore them to the society of the living, we must tear away the chains of misunderstanding."

"There is no reason – physical, mental or social – that advanced years should be the end of the road, particularly in our civilization," he said, and then added: "History is rich with examples of men who reached their primes after 65."

Dr. Orr took office as president of the of the American Medical Association at the Atlantic City convention and praised state and local medical societies for taking the initiative in implementing programs to help the aged at the local level.

"Throughout the nation," he said, "these societies are working out details and consulting with the insurance industry to develop low-cost coverage for our senior citizens. A number of policies have already been introduced by commercial firms."

He said medicine's interest in the aged ranges from progressive care in hospitals and nursing homes to homemaker services.

No Job For Government

Dr. Orr was strong in his belief that the government should *not* intervene in the care of the aged.

"Regardless of what we do for the aged," he said, "we must preserve the spirit of individual freedom, flexibility and voluntarism. Certainly, I can think of no easier way to erase all three of these qualities than to have the government step in and dictate how the aged must be cared for. Although it may appear enticing on paper, no program to help the aged can hope to succeed without flexibility. I am sure that no one would argue that all the diseases, ailments and complaints of Americans could be treated by one drug. How then could the many varying needs of the elderly be solved with one rigid formula?"

Dr. Orr said, too, that any government plan for the aged would be "disastrously expensive."

Experts, he said, estimate the government costs at $2 billion. "This," Dr. Orr said, "would necessitate raising the social security taxes to a point where that segment of our population under 65 would be forced to finance an indeterminate amount of health care for those over 65."

"Of course," Dr. Orr added, "any government plan would be compulsory, financially backbreaking, subject to political whim and political pressure, and hopelessly snarled in red tape."

BLUE SHIELD

IN AN ADDRESS before the national Blue Shield Professional Relations Conference in Chicago on Feb. 9, Dr. Louis M. Orr, of Orlando, Fla., president of the American Medical Association, urged physicians to "recapture the pioneering spirit" by utilizing their Blue Shield plans to solve the problem of providing prepaid medical care to our senior citizens.

"Medicine has done a fair job in the past" in meeting the health needs of our older citizens, Dr. Orr said. And it is now "preparing to set in motion a positive program for older citizens that will take into consideration . . . not only the health and physician needs, but their social, economic, occupational and psychological requirements." This, he pointed out, cannot be done by any huge federal spending program.

Dr. Orr called attention to the fact that proposed legislation of the Forand type would "completely alter the nature of the social security program," because for the first time, it would add personal services to a program that is now limited to cash benefits. "This new principle," he warned, "would open the door for evolution of a system of tax-paid health care for the entire nation. Indeed, it would establish the principle that provision of medical care for any segment of the population, or all of it, is a federal function."

Pointing out that more than 40 per cent of the people over 65 are already covered by voluntary health insurance, and commending Blue Shield, Blue Cross and the insurance companies for their achievements in this field, nevertheless Dr. Orr said, "Let's not live on past accomplishments. Let's not have America's health team become a mutual admiration society in which each member periodically lauds the other fellow for his plans, his surveys, and his continuing studies of the aged problems. Our individual jobs are *to think* and *to create*, to *develop* programs and then to put our sound ideas into *action*.

"I am gratified," Dr. Orr said, "that Blue Shield has been one of the first to pledge its all-out co-operation in working with the medical profession to do an effective job in providing medical care for the aged, especially the lower income groups."

HEALTH PROBLEMS OF AGING STUDIED BY HIF

AGING people inevitably face special health problems, and most older people have health problems that bother them to some extent," Health Information Foundation reports.

In fact, about 85 per cent of the persons in the over-65 age group interviewed recently in a Foundation-sponsored survey said they had had some health complaint or other illness which bothered them within the previous four weeks.

Persons 65 and over were found to average 7.6 visits to doctors a year per capita — about two visits a year more than the average for all age groups in this country. The survey also showed that almost two out of every five older persons had not seen a doctor during the previous 12 months, and 10 per cent of the survey group hadn't been to a physician in five years or more.

Only one out of every three persons interviewed who had a health complaint, however, had told a physician about it. "Economic factors seem to be a relatively minor element in this reluctance to see a physician," said George Bugbee, Foundation president. Even though incomes are generally lower among the older age groups, only 3 per cent of all persons 65 and older said they had delayed consulting a physician because of the cost.

Another reason why some older people fail to seek medical attention, Bugbee continued, "may be a feeling that visiting a doctor or a hospital is tantamount to acknowledging an inability to cope with the inevitable illnesses of old age."

Older persons, he conceded, "may be justified in reasoning that some sickness is inevitable. In addition, most of them remember a time, not too many years ago, when doctors and hospitals were far less effective then they are today. Modern medicine, however, often can alleviate or delay the disabilities of the later years. The proportion of people reaching advanced ages nowadays is in itself testimony to the skill of medical science. Older people need a greater awareness that the health professions can help all age groups — not simply those in the young and middle years."

Among the older persons who had visited a doctor within the four weeks before being interviewed, four out of every five were able to pay for the service, either from their own income or savings, or with the help of a relative. About 58 per cent of the persons paying for such services reported bills of under $10.

About one-fifth of the older persons receiving medical care in the four-week period had not had to pay for it, the Foundation report said. In most of these cases, the bill was met by a welfare or charitable agency, or else the doctor made no charge.

Graduate of Northwestern University Medical School, 1951. Internship Charity Hospital of La, 3 Years. General Practice in Miss. Finishing 4th year of General Surgical residency, York Hospital, York, Pa., June 30, 1959. Board eligible. Intend to practice General Surgery including some GYN. plastic, Orthopodics, vascular, chest. Looking for place in Southern Arizona to practice either by self or in association. If you can offer information or are interested in associate.

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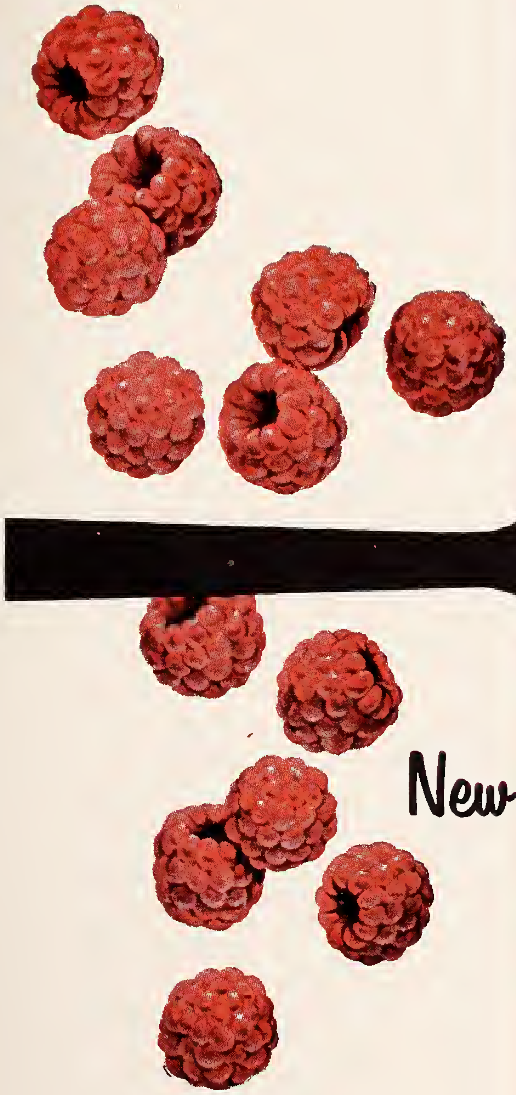

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HOSPITALIZATION: PLANNED SECURITY OR INSURANCE?

Frank C. Vogt, M.D.
The Frederick C. Smith Clinic
Marion, Ohio

LIKE THE weather, hospitalization insurance seems to be something about which everyone complains, and yet unlike the weather, (which changes often enough to keep at least some people satisfied some of the time) the problems of hospitalization insurance appear to get bigger and more involved. Articles in newspapers, in national magazines like *The Reader's Digest* and *The Saturday Evening Post,* discussions in medical society meetings, daily contacts with patients; all testify to widespread and mounting concern. It would appear that there is an increasing dissatisfaction with the existing situation, and we have progressed to the stage of organizing in groups in order to confuse the issue more efficiently. The insurance companies accuse the hospitals of charging too much, and the hospitals complain they are reimbursed too little. Many agree that patients in general voluntarily enter hospitals unnecessarily, although one has as much trouble as Diogenes to find an individual guilty of so doing. Some say that doctors put patients in hospitals needlessly, while the doctors insist that if any such instance could remotely be interpreted as having occurred, it was because the patient insisted on being hospitalized.

A workshop entitled "Liability of Insurance Carrier and of the Insured" at the October convention in San Francisco attacked the problem, with a panel consisting of Artemas C. Leslie, Esq., legal consultant, Blue Cross-Blue Shield, Pittsburgh, Pa., Mr. Albert V. Whitehall, director of Health Insurance Council, New York, New York, Dr. William W. Krieble, Associated Physicians Surgeons Clinic, Terre Haute, Ind., and Dr. John M. Rumsey, Rees-Stealy Medical Clinic, San Diego, Calif.

To attempt to summarize the two hours of discussion is most difficult, particularly when one considers the variety of subjects covered and the number of individual views expressed. It would be perhaps more accurate to consider this an opinion rather than a summary; an attempt to reach a solution rather than an effort to present a panacea.

Cost Vs. Benefits

Two major problems immediately present themselves in any insurance plan; the first is: "How much will it cost?" and the second is: "How much does one get back in benefits?" Obviously, the first question can be answered only by knowing the answer to the second; the greater the benefits, or the more often the benefits are utilized, the higher the cost.

One major factor increasing the cost of hospitalization insurance is the complicated interplay of economic factors generally identified as inflation. As we all know only too well, everything costs more these days. In this instance, the price of food and supplies, and the wages paid to hospital employes, etc., have risen steadily, so that the per diem cost of keeping a patient in a hospital has increased about 258 per cent in recent years. The development of new and expensive devices and equipment, not in use previously, and the employment of more, and more complicated laboratory work, X-ray studies, etc., have also contributed to rising costs.

Increasing utilization of benefits has further raised insurance rates. To oversimplify, from the old concept of a hospital being a place to go to die, hospitals have become accepted as places to go to get well. Hospitals themselves have improved in attractiveness and pleasantness, and the amount of service rendered to the patient, at least as reflected by the increased numbers of nurses, nurses' aids, and other attendants, must also have greatly increased. The net effect is that more and more people go to hospitals more often to receive more costly care; and as statistical studies have shown, they tend to stay longer (average is two days longer in recent years). This is especially true if they have hospitalization insurance.

What Can Be done?

Steadily increasing premiums, necessary to cover the steadily increasing expenditures, have begun to reach a level high enough to hurt, and to signal that all is far from well. What can be done to improve the situation? Here are some thoughts which may prove to be helpful.

When the original hospitalization plans were formulated, they were insurance plans in the sensible use of the word, insurance. Becoming a hospital patient was not viewed as desirable;

one did not go to the hospital if it could be avoided, and one remained there for as short a time as possible. The plans thus protected the potential patient against major illnesses or accidents. Minor medical problems were cared for outside the hospital and were not covered by insurance. The premiums could be kept low, and the plans worked well to provide efficient protection in the area in which insurance works most efficiently; i. e., as protection against major events which would otherwise be a severe financial strain on the individual.

Return to Basic Concepts

With the passage of time, changes have come about as touched on previously, until we now find ourselves struggling with very expensive premiums because we have attempted to depart from the basic purpose of insurance, and tried to make the coverage too broad. The cost of processing a claim for a small amount is as great as that for a large amount, and the more claims that are filed, and the more the benefits are utilized for minor illnesses, the greater the costs of insurance until the point of practicality is exceeded. As a crude analogy, one could obtain insurance on shoe laces, but it would be much cheaper to just replace them as necessary. The first thought that is offered then, is to return to basic insurance plans that cover major illnesses or accidents, and not to try to cover all medical eventualities by insurance. Only by so doing can premiums be kept at a level low enough to be practical for everyone.

The problem of misuse of insurance plans is not really as complex as it might appear at first glance, and effective checks against abuses can be put into practice which should greatly improve the current situation. Let us begin by considering first the role of the insured or potential hospital patient.

Individual Responsibility

The more responsibility is placed on an individual, or the more he is made to be responsible for himself, the less abuses will occur, and the more efficiently insurance will function. Reference to some current stiuations may be helpful in making this concept more meaningful. For instance, take the problem of insuring an automobile against collision damage. If the insurance company is made fully responsible, the premium is very high. The introduction of a deductible clause, which makes the insured responsible for the first $50 results in a considerable reduction in premium, while a $100 deductible policy is decidedly lower in rate. This is essentially the same principle as placing more responsibility on the individual. A hospitalization plan using this co-insurance concept has an effective check against unnecessary utilization. An individual who feels that he has been paying on an insurance policy for some time, and who has a policy which covers the entire cost of hospitalization, would be much more likely to enter a hospital unnecessarily than an individual who knew that he was going to have to pay at least a reasonable portion of the bill. While great peace of mind results from having insurance which covers major damage to ones' car, it would be most unlikely that anyone would not do all he could to avaid a crumpled fender if the policy had a $100 deductible provision.

Physician Plays Major Role

The physician plays the other major role in this problem, and being a mature and responsible individual, he is the key to a workable solution. In the first place, the criteria for hospitalizing a patient should not include the existence of a hospitalization policy. Hospitalization insurance should be viewed as a protection against the costs of hospitalization and not as an invitation to hospitalization. A patient should be hospitalized because hospital facilities are really needed for proper management of the case, and not merely because a policy is in effect that would pay the bill. Furthermore, it is the responsibility of the physician to manage the patient as efficiently as possible. The ordering of unnecessary, irrelevant or needlessly repetitious laboratory work, X-ray examinations, etc., is inexcusable not only from the point of professional standards, but also from the economic viewpoint. In the final analysis, one is not spending the insurance company's money, but the money of the insured.

To the extent that hospital stays are made needlessly expensive, premium costs increase needlessly. Need we be reminded that doctors are just as surely potential patients as anyone?

Pressures Brought to Bear

A physician is accustomed to making decisions and accepting the responsibility for the welfare and life of his patients. It is difficult then, to give a tactful answer to the few who attempt to excuse unnecessary hospitalization or the use of questionable but suitable diagnoses on insurance claims, by such explanations as that the patient insisted on it, or that the patient might have gone to another more "co-operative" physician. While we may have these pressures brought to bear on us, they are only part of the many pressures we are exposed to daily. It is our responsibility to face up to them, and to do what is best for all concerned. The physician's attitude toward the improper use of insurance must be the same as his attitude toward the unnecessary removal of tonsils or appendices. Each must examine the facts and test his conclusions against his conscience before reaching a final decision.

Deductible and Co-Insurance Plans

The "major medical" plans which have appeared in recent years go far toward a workable solution to this many faceted problem. By covering major illness only, and avoiding any attempt to insure against the minor, day-to-day medical expenses which can be borne much more economically by the patient than by insurance, a return has been made to employing insurance in its most efficient area. The responsibility of the plan is placed squarely on the shoulders of the patient and the physician. The patient pays a pre-arranged portion of the cost, by "deduction" and co-insurance, and thus is deferred from incurring unnecessary expense. No restriction is placed on *where* the service is rendered; it may be in the doctor's office or in a hospital; this feature provides for the management of the many cases currently hospitalized under present hospitalization plans which could be managed just as well and far less expensively outside the hospital.

The question might well be asked about the popular acceptance of such plans, since they differ from the previously customary hospitalization plans. By the end of 1957, there were over 13 million Americans protected by major medical expense plans, a figure representing an increase of 49 per cent over 1956. At the same time, about 55 million were covered by Blue Cross, Blue Shield, and medical society plans, or about a 1 to 4 ratio. It would seem that the major medical concept is growing rapidly in acceptance, and is proving practical in its application. That assumption of responsibility for efficient use of hospital insurance plans by the individuals directly concerned as a sound, practical concept is indicated by experience in Ohio, where 2,000 Blue Cross subscribers were changed to an 80/20 plan, in which Blue Cross pays 80 per cent of the hospital bill, and the subscriber pays 20 per cent. The hospital admission rate for this group was 134 per 1,000 in 1956 under a full contract plan, and dropped to 80 per 1,000 in 1957 under the 80/20 plan. In addition to the lower admission rate, the hospital stays were also shorter.

Solutions

In essence, it may well be that the solution to the health insurance problem is simply (a) to return to the basic concept of efficient insurance (protection against *major* illness or accidents), (b) to have subscribers understand clearly *what* is covered as well as *where* it is to be treated, and (c) to define the extent to which both the subscriber and the insurance company are liable. These factors, together with the consistently sincere efforts of physicians to treat patients as economically as each case will permit, should go a long way toward solving present mutual difficulties.

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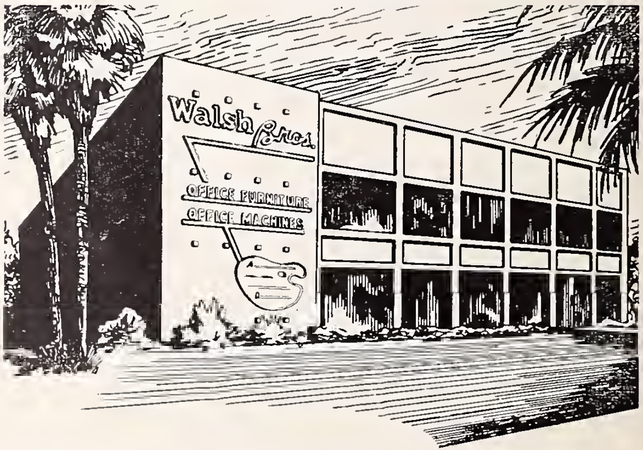

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AMERICAN CANCER SOCIETY

CANCER & STRESS

YALE UNIVERSITY scientists have found that cancer depresses a patient's ability to cope with stress; and they have traced this to a defect in thyroid metabolism.

The findings have given the thyroid gland a heretofore unrecognized but highly important role in the body's resistance to stresses and strains.

The results of this research, headed by Dr. Ira S. Goldenberg at the Department of Surgery, Yale University School of Medicine, were reported by the American Cancer Society which has helped support it.

The scientists have made measurements of the amount of thyroid hormone circulating in patient's blood before, during and following operations. They also tagged the hormone with radioactive iodine, injected or fed it to patients, and traced its course through the blood.

It was found that in response to operative trauma, the thyroid gland poured out its hormone. The brief rise was noted shortly after surgery began; and a fall to normal levels occurred usually before the operation was completed. The hormone circulated throughout the entire body, was used rapidly and was excreted by the cells.

There were exceptions, however. Patients who had had a recent earlier operation, who had suffered from emotional shock or who had endured severe infection or other stress did not show the standard sharp rise and fall of blood hormone. Neither did the chronically ill – especially the cancer patients.

In cancer and recently stressed patients, apparently the thyroid hormone was not being produced or used by the body in a normal way.

ChE IN RBC

A NEW TEST on a single drop of blood will tell how fast a person is manufacturing red blood cells and how long the cells live.

The test is of value in determining the nature of many anemias, including those associated with leukemia and cancer.

The American Cancer Society reported that the test had been developed by Dr. Jean C. Sabine, in the Cancer Research Institute at the University of California Medical Center. Dr. Sabine's work was done with the co-operation of Dr. Harry Lee, Miss Catherine A. Lambert, Dr. Myron Pollycove, and Miss Lucy C. Castro.

The test consists of measuring the amount of an enzyme, cholinesterase (ChE), in the red blood cells. Cholinesterase breaks down acetylcholine.

ChE is thought to strengthen the red blood cells' outer membrane or "skin." As red cells age, they lose ChE; the normal red cell, which lives about 120 days, has only 10 to 20 per cent as much ChE when it dies as when it was born in the bone marrow.

In one group of anemias, the red cells die prematurely and the bone marrow manufactures large numbers of new ones in an effort to cope with this loss. In these cases, the red blood cells contain large amounts of ChE. It is possible to calculate, from the amount of ChE in the red cells, what their average age is and therefore how long they live.

In other anemias, which are due to the marrow's sluggish production of red cells, ChE is normal or low.

Barometer-Like Function

Anemias due to rapid red cell destruction may occur in otherwise normal persons. They also occur sometimes in association with leukemia and cancer; in these patients the red cell ChE is helpful in detecting how well the bone marrow is functioning. Most of the drugs used in treating cancer affect bone marrow function, but each patient reacts to a different degree.

These diseases in themselves may affect bone marrow function. Dr. Sabine has followed patients with leukemia from the onset of the disease to its inevitable termination, and the red cell ChE has frequently predicted remissions and relapses in advance of their actual occurrence.

A rapidly falling red cell ChE has given warning that a patient who has apparently been doing well ought to be watched closely so he could receive appropriate treatment. On the other hand, a rising ChE has given some assurance that a sick patient might be able to leave the hospital for Christmas, for example; and a well-sustained ChE, that an apparently well patient might safely take a trip.

The ChE test has been used in more than 400 patients here and at the Los Alamos, N.M., Medical Center. It is now regarded by those who use it as a sensitive barometer indicating future fair weather or foul for many patients with blood disease.

The test measures the concentration of acetylcholine in two solutions, to one of which a small amount of blood has been added and allowed to work for 30 minutes. The other serves as a standard for comparison. Acetylcholine reacts with added chemicals to form a clear brownish color which is read in a colorimeter; the more ChE was present, the more acetylcholine was destroyed and hence the paler the "test" is compared to the "standard."

VIRUS PREVENTS TUMOR

AND NOW comes a virus which *prevents* tumors.

The American Cancer Society reported that Dr. Walter Burdette, University of Utah scientist, has found that a virus infection saves 15 or 20 per cent of fruit flies from tumors to which they are hereditarily susceptible.

The virus is interesting in several respects: (1) It can be passed from mother to offspring in the egg; (2) It resides in the outer part or cytoplasm of cells, yet it somehow overcomes the effect of genes deep in the nucleus, including the one which makes the flies 100 per cent susceptible to large, black tumors; and, (3) It makes the flies sensitive to carbon dioxide — uninfected flies merely sleep in a carbon dioxide environment, but flies with the virus are quickly killed by the gas, or paralyzed.

Dr. Burdette is interested in determining the role of genes in cancer and cancer susceptibility. The virus, he found, modifies the action of genes in a benevolent manner insofar as it prevents tumors, even though its origin may have been very remote from genes and chromosomes.

The Utah scientist also used X-rays to mutate the gene which made the first flies susceptible to tumors. The effort succeeded in only two of 76,483 tests. The two flies and many of their offspring lost their susceptibility to tumors, indicating that the tumor gene was a more complex change in the chromosome than a simple loss of substance to which certain scientists have attributed the origin of cancer in the past.

The experiments throw a new light on the parts played by genes and viruses in the development of cancer.

NATIONAL LEAGUE FOR NURSING, INC.

THE Commonwealth Fund is providing continuing support for the National League for Nursing fellowship program. This program provides generous fellowships for nurses having superior ability and leadership qualities who are engaged in programs of advanced study. During the five years of its existence, 126 fellowships have been granted, 95 for fellows engaged in doctoral study, and 31 for those studying at the master's level.

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LOCATION OPPORTUNITIES

ASHFORK — Population 700 — North centrally located — Railroad center — Contact the Women's Club, Ashfork, Ariz.

CAMP VERDE — Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Ariz.

EL MIRAGE — Population 2,000 — and including the trading areas of Surprise, Youngtown, Peoria and Luke Air Force Base and population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving, with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available and in the area surrounding El Mirage from Glendale (nine miles) to the east, and Wickenburg (35 miles) to the west there are only two doctors to serve this community. The need for an M.D. and/or surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Ariz.

GILA BEND — Population 2,500 — 80 miles west of Phoenix — Nearest town to the Painted Rock Dam Project — Good opportunity for GP. Cattle, cotton, and general farming. Office and equipment available. $150 monthly income from board of supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

GLOBE — Population 10,000 and including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about one hour by car from either Tucson or Phoenix. No ENT man in the area, will consider GP. New medical center, hospital, all church denominations, schools, clubs, etc. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad Ct., Globe, Ariz., or Ellis L. Pollock, M.D., Miami Inspiration Hospital, Miami, Ariz.

HAYDEN — Population 3,000/4,000 — Industrial practice — approximately 200 employes and dependents. Only part-time required. Coverage: Metropolitan Surgical Plan. Phyiscian may engage in private practice also. Small company-owned clinical building (new) available for use, with X-ray equipment, diathermy equipment, etc. Full-time nurse available to assist; clerical work to be handled by company. Company housing facilities available for physician-small rental. Contact: American Smelting & Refining Company, Mr. Ben Roberts, Department Manager, P.O. Box 1111, El Paso, Texas.

MIAMI — Opportunity for GP — Industrial hospital staffed by approximately seven doctors, who care for personnel and families of those who work for the three principal mining companies. Community served by many mining and ranching interests. Contact Robert V. Horan, M.D., Miami Inspiration Hospital, Miami, Ariz.

MORENCI — Mining community near New Mexico - Arizona border. Population 10,000. Has vacancy at hospital for GP. Contact Carl H. Gans, M.D., Morenci Hospital, Morenci, Ariz.

PAGE — Population growing by leaps and bounds at the site of the new Glen Canyon Dam Project. Current estimates are 6,000 to 8,000 total. Only one M.D. is now located in Page and he has facility available. Located about 90 miles north of Flagstaff, Ariz., the building project is estimated to be concluded in 10 years. Write Ivan W. Kazan, M.D., 6th Ave., & S. Navajo, Page, Ariz., for full details.

SAFFORD — Graham County Health Department in need of an M.D. In the heart of the cattle and farming areas of southeastern Arizona. Population of 10,500. Elevation is 2,920 feet. Schools, churches and social facilities are numerous. Contact Mr. Verl Lines, Chairman, Graham County Board of Supervisors, Safford, or Frederick W. Knight, M.D., 618 Central Ave., Safford, Ariz.

ST. JOHNS — Seriously need a doctor of medicine, preferably a GP, in this east-central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

TOLLESON — In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 8112 West Van Buren St., Tolleson, Ariz.

TUCSON — The VA hospital is in urgent need of an orthopedic surgeon. They prefer someone who is board certified, but would take someone who has had special training, as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact S. Netzer, M.D., Director, Professional Service, V.A. Hospital, Tucson, Ariz.

WINSLOW – Population over 7,500. Good opportunity for GP. Arrangements can be made to take over existing vacancy in practice. Facilities quite desirable and satisfactory terms can be arranged to suit any financial circumstance. Hospital privileges immediately available. County work also available at $500 per month plus lab and X-ray. For further details, contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz., or Mr. Paul Gear, County Supervisor, Court House, Holbrook, Ariz.

FOR INFORMATION ON OPPORTUNITIES IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Ariz.

Carl H. Cans, M.D., Phelps Dodge Hospital, Morenci, Ariz.

Ira E. Harris, M.D., Miami Inspiration Hospital, Miami, Ariz.

Charles B. Huestis, M.D., Box 928, Hayden, Ariz.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Ariz.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Ariz.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Ariz.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Ariz.

LOCATION INQUIRIES RECEIVED

BETHUNE, DONALD S., M.D., 284 Murray Ave., Larchmont, N. Y.; *OB-GYN;* 1948 graduate of the University of Pennsylvania; interned and served residency at Hospital University of Pennsylvania; fulfilled military obligations; holds license in the states of Pennsylvania and New York; applying for Arizona license; married; available Sept. 1, 1959.

BISSEL, FRED A., M.D., 100 Greenboro Lane, Pittsburgh 20, Pa.; *I-CA;* 1935 graduate of Hahnemann Medical College; interned at Shadyside Hospital in Pittsburgh; holds license in State of Pennsylvania; interested in group or associate practice; married; age 51; available within few months after finding location.

CREWS, ROBERT LEE, M.D., 5040th USAF Hospital, Anchorage, Alaska; *OB-GYN;* 1954 graduate of Vanderbilt Medical School; interned at Univeristy of California Hospital in San Francisco; served residency at Jackson Memorial, University of Miami in Miami, Fla.; holds license in states of Florida and Tennessee; military status – to be discharged July 1960; interested in private or associate practice; married; age 31; available July 1960.

GRAY, CHARLES HELMAN, M.D., LL.B., 2400 N. Dickerson St., Arlington, Va.; *Admin or Medico-Legal*; 1948 graduate of Stanford University; interned at Highland-Alameda County Hospitals in Oakland, Calif.; served residency at St. Francis Hospital in San Francisco; holds license in State of California; fulfilled military obligations; interested in industrial or insurance practice, will consider associate or institutional practice; married; age 38. Available approximately June 1959.

GREER, WILLIAM EDWARD, M.D., Box 54, Westfield, Ind.; *Otolaryngology;* 1953 graduate of Indiana University School of Medicine; interned at Memorial Hospital in Phoenix; serviced residency at IUMC in Indianapolis, Ind., VA hospital in Dallas, Texas and USN Hospital in Bethesda, Md.; holds license in the State of Indiana; fulfilled military obligations; interested in group practice or partnership; married; age 37. Available.

HARRISON, WILLIAM S., M.D., 2623 Pittsfield Blvd., Ann Arbor, Mich.; *I;* 1953 graduate of the University of Oklahoma; interned and served residency at University Hospital in Ann Arbor, Mich.; fulfilled military obligations; holds license in states of Oklahoma and California; married; age 31; interested in clinic practice. Available Sept. 1, 1959.

JOHNSTON, ROY E., M.D., 514B-7th Ave., Coralville, Iowa; *S;* 1954 graduate of the University of Iowa; interned at Highland Park General Hospital in Highland Park, Mich.; served residency at University Hospital in Iowa City, Iowa; holds license in State of Iowa; fulfilled military obligations; married; age 35; interested in group or associate practice. Available Jan. 1, 1960.

LOGAN, RICHARD S., M.D., 421 Wyola Road, Santa Barbara, Calif.; *D;* 1943 graduate of Indiana University; interned at Gorgas Hospital, Ancon, Panama Canal Zone; served residency at VA Center in Los Angeles; holds license in states of Indiana, Illinois, Wisconsin and California; fulfilled military obligations; married; age 40; interested in clinic, assistant or associate practice. Available July 1, 1960.

LYNCH, THOMAS A., M.D., 7009 N. 7th St., Tacoma, Wash.; *R*; 1950 graduate of the University of Washington; interned at San Diego County Hospital; served residency at Baylor University Affiliated Hospitals in Houston, Texas; holds license in states of California, Texas and Washington; fulfilled military obligations; married; age 59; interested in group, associate practice or hospital radiology department. Available — depending on circumstances of new position.

SAMLER, JACOB D., M.D., 602 South 44th Ave., Omaha, Neb.; *PN*; 1954 graduate of the University of Nebraska; interned at Indianapolis General Hospital; served residency at Nebraska Psychiatric Institute in Omaha; holds license in State of Nebraska; fulfilled military obligations; married; age 28; interested in institutional practice (possibly part time state mental hospital). Available Oct. 15, 1960.

VESPA, RAYMOND, M.D., 959 - 21st St., Des Moines, Iowa; *GS*; 1951 graduate of the Univercity of Illinois College of Medicine; interned at Research and Educational Hospital, University of Illinois; served residency at VA hospital in Des Moines; fulfilled military obligations; holds license in State of Illinois; married; age 36; interested in group or associate practice. Available June 1, 1959.

WILLIAMS, THEODORE L., M.D., 1607 New Jersey Ave., Apt. 3, New Castle, Del.; *IND-D*; 1934 graduate of the Colorado School of Medicine; interned and served residency at Denver General Hospital in Denver, Colo.; holds license in states of Colorado and Delaware; married; age 57; interested in clinic (if industrial), assistant or associate (dermatology) or medical director. Available immediately.

WILLIS, JR., HENRY S. K., M.D., 4050th USAF Hospital, Westover Air Force Base, Massachusetts; *Aviation Medicine;* 1952 graduate of Duke University School of Medicine; interned at Detroit Receiving Hospital, Detroit, Mich.; served residency School of Aviation Medicine, Randolph AFB, Texas; military status — currently on active duty. Original commission Jan. 22, 1953; married; age 36; interested in industrial practice. Available within 12 weeks after deciding location.

Future Meetings

NORTHERN ARIZONA MEDICAL SEMINAR

ARIZONA STATE COLLEGE, FLAGSTAFF

Visiting Lecturers

Wiley Barker, M.D., associate professor of surgery, University of California at Los Angeles College of Medicine, Los Angeles, Calif.

Byron E. Hall, M.D., associate clinical professor of medicine, Stanford University College of Medicine; director, Cancer Chemotherapy Unit, Stanford University College of Medicine, San Francisco, Calif.

Paul E. Teschan, M.D., director, Renal Research Unit, Brooke Army Hospital, San Antonio, Texas.

Ralph Reis, M.D., professor of obstetrics and gynecology, Northwestern University College of Medicine, Chicago, Ill.

Henry J. Silver, M.D., professor of pediatrics, University of Colorado College of Medicine, Denver, Colo.

Program

AUG. 6:

9:30 - 10 Registration

10 - 10:30 Recognition of Surgically Correctable Arteriosclerosis. Dr. Wiley Barker.

10:30 - 11 Use of Hormones in Obstetrics and Gynecology. Dr. Ralph Reis.

11 - 11:45 The Child Who is Too Short. Dr. Henry J. Silver.

11:45 - 12:15 Question period.

12:30 - 2 Luncheon and Round Table discussion.

2:15 - 2:45 Modern Management of Leukemias and Lymphomas. Dr. Byron Hall.

2:45 - 3:30 Management of Anuria. Paul Teschan, M.D.

3:30 Discussion period.

AUG. 7:

10 - 10:30 Surgical Treatment of Arteriosclerosis. Dr. Wiley Barker.

10:30 - 11 Management of Prolonged Labor. Dr. Ralph Reis.

11 - 11:45 Chemotheropeutic Management of Metastatic Solid Tumors. Dr. Byron E. Hall.

11:45 - 12:15 Question period.

12:30 - 2 Luncheon and Round Table discussion.

2:15 - 2:45 Recent Developments in Diseases of the Newborn. Dr. Henry J. Silver.

2:45 - 3:15 Modern Concepts in The Management of Urinary Infections. Dr. Paul Teschan.

3:15 - 3:45 Disaster Planning. Dr. Wiley Barker.

3:45 Discussion.

General Notices

PLACE –

All meetings will be held at the auditorium of the Arizona State College at Flagstaff.

REGISTRATION –

Registration booths will be maintained in the foyer outside the auditorium at the Arizona State College. A fee of $20 will be charged. This will entitle the registrant to two luncheon meetings, the general meeting and will pay the greens fee of those wishing to play golf at the Coconino Country Club.

ENTERTAINMENT –

Registrants will have the privilege of playing golf at the Coconino Country Club. This new golf course has grass greens and fairways. It has been opened for the first time this year.

For The Ladies – Trips are being provided to Grand Canyon, Oak Creek Canyon, Sedona and the Red Rock country.

An informal cocktail party, dinner and dance will be held Friday, Aug. 7 at 7 p.m. at the Monte Vista Hotel. Tickets will be available at the registration desks.

13TH ANNUAL ROCKY MOUNTAIN CANCER CONFERENCE

Denver, July 22-23, 1959

Co-sponsored by Colorado State Medical Society and Colorado Division of the American Cancer Society. No registration fee.

Hotel space has been reserved at the Brown Palace Hotel for physicians and their families attending this conference. Please write to the hotel for your reservations. Address: Brown Palace Hotel, Denver 2, Colo.

Should you desire motel space, address inquiries to Cancer Conference, 835 Republic Building Denver 2, Colo.

Program

WEDNESDAY, JULY 22, 1959:

Morning:

Symposium on Cancer of the Colon. Participants: Benjamin Castleman, M.D., Walter Palmer, M.D., Eugene P. Pendergrass, M.D., J. Garrott Allen, M.D.

Noon:

Round table luncheon.

Afternoon:

Chemotherapy of the Leukemias and Lymphomas. Edward N. Reinhard, M.D.

Tumors of the Thymus Gland. Benjamin Castleman, M.D.

Louis T. Orr, M.D. (subject not announced).

Evening:

Banquet – Brown Palace Hotel. Mr. Jeff Williams, Speaker.

THURSDAY, JULY 23, 1959

Morning:

Symposium on Anemias in Cancer. Participants: J. Garrot Allen, M.D., Edward H. Reinhard, M.D., Benjamin Castleman, M.D.

Noon:

Round table luncheon.

Afternoon:

Carcinoma of the Stomach. Walter Palmer, M.D.

Evaluation of Treatment of Carcinoma of the Breast in its Total Pattern. J. Garrott Allen, M.D.

Advances in Cancer Research and Control. James R. Heller, M.D.

Eugene P. Pendergrass, M.D. (subject not announced).

Adjourn.

25TH ANNUAL MEETING of the POSTGRADUATE MEDICAL ASSEMBLY of South Texas

July 20, 21, 22, 1959

Monday through Wednesday

Executive Office: 412 Jesse H. Jones Library Building, Houston 25, Texas

REGISTRATION:

The registration fee of $25 includes all features – scientific sessions; scientific exhibits;

technical exhibits; medical motion pictures . . . plus three luncheons in the Shamrock-Hilton's beautiful Emerald Room and the ladies' fashion show and tea and the dance and floor show. If you don't choose to attend the dance and floor show, the registration fee is $20.

UNIVERSITY OF COLORADO MEDICAL CENTER

Third Annual Postgraduate Course on
THE PREVENTION AND MANAGEMENT OF ATHLETIC INJURIES FOR THE TEAM PHYSICIAN
AUG. 10, 11, 12, 1959

FUTURE POSTGRADUATE COURSES:

June 15-19, 1959, Special Topics in Internal Medicine.

July 6-8, 1959, Obstetrics and Gynecology.

July 6-9, 1959, Opthalmology (Aspen, Colo.)

July 16-18, 1959, Dermatology For General Practitioners.

Aug. 17-21, 1959, Western Cardiac Conference

Sept. 3-8, 1959, Pediatrics (Estes Park, Colo.)

Oct. 30-31, 1959, Cardiopulmonary Disease Seminars.

Jan. 11-16, 1959, General Practice Review.

SECOND ANNUAL POSTGRADUATE REFRESHER COURSE

University of Southern California School of Medicine
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July 29 - Aug. 15, 1959

REGISTRATION:

Please mail check made payable to the University of Southern California, and this application form to Director, Postgraduate Division, USC School of Medicine, 2025 Zonal Avenue, Los Angeles 33, Calif. All applicants must possess an M.D. degree. (For travel arrangements, also complete registration coupon and send to FitzPatrick Travel Service.)

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July 16, 17, 18, 1959

The University of Colorado School of Medicine, Division of Dermatology of the Department of Medicine. The Office of Postgraduate Medical Education and Fitzsimons Army Hospital.

AMERICAN CANCER SOCIETY CALENDAR NATIONAL MEETINGS

Date	*Meeting*	*Place*
July 1959		
22-23	Rocky Mountain Cancer Conference	Brown Palace Hotel, Denver, Colo.
23-30	International Congress of Radiology	Munich, Germany
August 1959		
4-7	International Association of Laryngectomees	Penn Sheraton, Pittsburgh, Pa.
10-13	National Medical Association	Detroit, Mich.
24-27	American Hospital Association	Statler Hotel, New York City
30-Sept. 4	World Conference on Medical Education	Palmer House, Chicago, Ill.
September 1959		
6-12	College of American Pathologists	Palmer House, Chicago, Ill.
7-12	World Medical Association	Montreal, Canada
11-12	International Congress on Air Pollution	New York City
13-17	International College of Surgeons	Palmer House, Chicago, Ill.
14-18	American Dental Association	New York City
28-Oct. 2	American College of Surgeons, Clinical Congress	Hotel Traymore, Atlantic City, N. J.
October 1959		
2-3	American Medical Writers' Assn.	St. Louis, Mo.
19-23	American Public Health Association	Convention Hall, Atlantic City, N. J.
23-27	American Heart Association Annual Meeting	Bellevue Stratford, Philadelphia, Pa.
26-28	National Rehabilitation Association	Boston, Mass.
November 1959		
19-21	ACS Scientific Review Committee — "Role of Viruses in Cancer"	Westchester Country Club, Rye, N. Y.
December 1959		
1-4	American Medical Association Clinical Meeting	Dallas, Texas
2-5	American Public Welfare Association National Biennial Roundtable Conference	Statler Hotel, Washington, D. C.
February 1960		
28-March 3	American College of Surgeons, Four-day Sectional	Boston, Mass.
March 1960		
13-18	National Health Council	Miami, Fla.
17-19	American Radium Society	Caribe Hilton Hotel, Puerto Rico
28-31	American Academy of General Practice	Philadelphia, Pa.
April 1960		
4-8	American College of Physicians	Mark Hopkins and Fairmont Hotels, San Francisco, Calif.

"It is concluded that the addition of buffering agents to acetylsalicylic acid in the concentrations used serves no clinically detectable useful purpose."[1]

[1] Sadove, Max S. and Schwartz, Lester: An Evaluation of Buffered Versus Nonbuffered Acetylsalicylic Acid, Postgraduate Medicine; 24:183, August, 1958.

Nonbuffered Material Used—Bayer® Aspirin.

Women's Auxiliary

FEDERAL LEGISLATION

UNFORTUNATELY, legislation does not offer immediate results which can be tabulated monthly or even yearly and, therefore in some cases, we must renew our interests and efforts in regard to the same bills year after year. We cannot afford to let our guard down and thereby be caught "asleep at the switch" so to speak. It probably does seem to many that it is useless, or at least a duplication, to write letters to our senators and representatives on these same bills time and time again; however, a bill stays alive through the two-year term of a congress, but if it is not passed upon in that time, it must be reintroduced and start the whole legislative procedure over again. Such is the case with two of the most important bills before this 86th congress in which the American Medical Association is most vitally interested. They are the Keogh-Simpson (formerly Jenkins- Keogh and the same bill) HR 10 and the Forand bill – HR 4700.

The Keogh-Simpson bill would permit a self-employed person to deduct, from adjusted gross income, 10 per cent of net earnings from employment, or $2,500 annually, whichever is the lesser, providing the money is placed in a restricted retirement fund. Maximum lifetime set-aside could not exceed $50,000. The bill also would allow additional deductions for persons 50 years or older at time of passage, and provides a tax penalty if money is withdrawn prior to the established date. The recipient would pay his deferred income tax on the money when received in the form of retirement payments.

This bill was passed by the house of representatives on March 16, by a two-thirds majority vote, and sent to the senate where there will be hearings before the senate finance committee. At this time, no date has been set for these hearings. It might be well to be aware of and review some of the pros and cons of this legislation.

The biggest objection comes from the treasury department, which, though admitting that the self-employed are discriminated against with respect to tax easement for retirement plans, is not exactly anxious to let any tax funds escape at the present time.

Under the present law, corporations need not pay taxes on money put into retirement plans for their employes, but the self-employed are denied this advantage.

The Forand bill – HR 4700 – would amend the Social Security Act and the Internal Revenue Code by adding health insurance benefits to the old-age and survivors insurance system and by raising social security taxes. The custom of amending the Social Security Act biennially, just in time for elections, is pretty well established. This is a law that buys many votes, as it puts cash benefits into the hands of voters, which, though not free, are at least paid for in full or even in large part by the recipients. It buys votes and provides federal jobs at the same time. Therefore, you may be assured that you will hear more of this bill in the next year.

The American Medical Association, and other related groups, have formed a Joint Council to Improve the Health Care of the Aged, and are spending time and money in an educational effort to support the voluntary system of health service in this nation. It might be well for us, as auxiliary members, to let our friends know that the medical profession is keenly interested in improving the health care of the aged and are working very diligently toward this end. Some insurance companies and Blue Cross and Blue Shield organizations in Arizona and other states have hospitalization and surgical plans for those over 60. This is a step in the right direction and let us hope that more health plans will be made available for them, so that legislation like the Forand bill will not be necessary.

This bill, which has been introduced in this 86th congress, has been referred to the ways and means committee. No date has been set for the hearing, as yet, and any delay in this legislation is encouraging, as it gives the medical profession and insurance industry more time to work on these health plans mentioned above.

If this legislation were to pass, those persons in the high income brackets, who are under social security, would enjoy health benefits as well as those who are in the low income brackets.

These are the most important bills before the legislature at the present time and we will undoubtedly be called upon to lend our support in the very near future, so when your legislative chairmen request action, please co-operate and send those communications. They are most important to our future and to that of our children.

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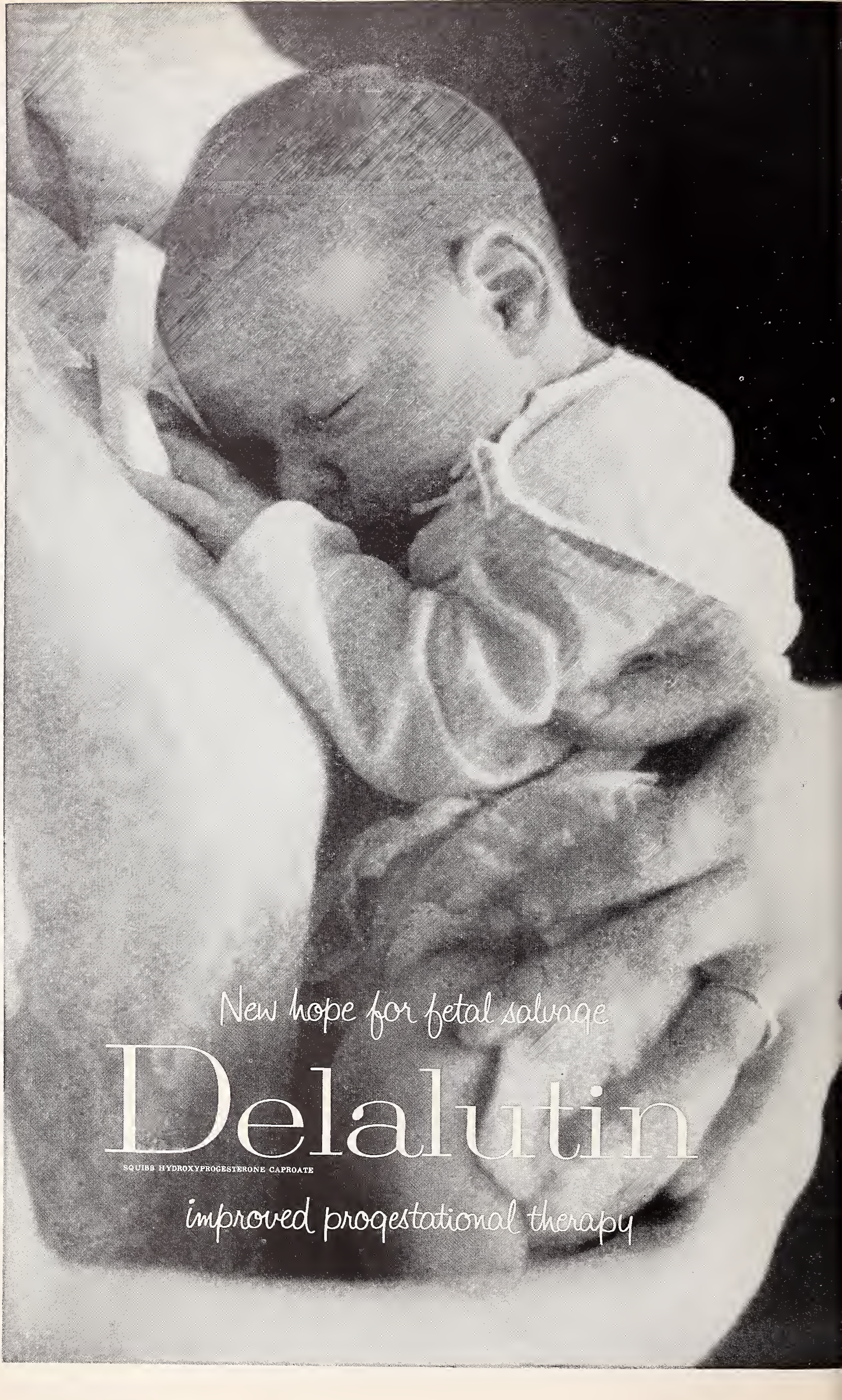
New hope for fetal salvage
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improved progestational therapy

The results of administering Delalutin before the 12th week of gestation to 82 women with habitual abortion were reported recently by Reifenstein.[1] Every patient had experienced at least three consecutive abortions immediately preceding the treated pregnancy. More than 68% of these women were delivered successfully and uneventfully following Delalutin therapy.

Boschann,[2] in a study of pregnancies with threatened abortion, found that:

37% of 73 pregnancies were carried to term without progestational therapy
64% of 42 pregnancies were salvaged by progesterone
83% of 73 pregnancies were salvaged by Delalutin

Eichner,[3] found that with Delalutin fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved.
108 (76%) of 142 babies of this birth weight survived without progestational therapy.
16 (100%) of 16 babies of this birth weight survived with Delalutin therapy.
A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation.[4] Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active," well-tolerated and long-acting.

Delalutin offers these advantages over other progestational agents:

- longer-acting and more sustained therapy
- more effective in producing and maintaining a completely matured secretory endometrium
- no androgenic effect
- more concentrated solution requires injection of less vehicle
- unusually well-tolerated, even in large doses
- requires fewer injections
- low viscosity makes administration easier

DELALUTIN is also potent and safe therapy for: threatened abortion; postpartum after-pains; amenorrhea, primary and secondary; dysfunctional uterine bleeding not associated with genital malignancy; infertility with inadequate corpus luteum function; production of secretory endometrium and desquamation during estrogen therapy; premenstrual tension; dysmenorrhea; cyclomastopathy, mastodynia, adenosis and chronic cystic mastitis.

Administration and Dosage: Because of its low viscosity, Delalutin may be administered with a small gauge needle (deep intragluteal injection). Complete information on administration and dosage is supplied in the package insert.

Supply: Delalutin is available in vials of 2 and 10 cc., each cc. containing 125 mg. of hydroxyprogesterone caproate in sesame oil, and benzyl benzoate.

References: 1. Reifenstein, E. C., Jr.: *Annals N. Y. Acad. Sci.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. and Gyn.* 76:279, 1958.

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Chief among the drawbacks to aspirin usage is gastric intolerance. This ranges from mild upset and "heartburn" to severe hemorrhagic gastritis.[1-10] Studies performed in conjunction with gastrectomy[4, 5] and gastroscopy[2] have shown insoluble aspirin particles firmly adherent to the gastric mucosa and imbedded between rugae. Reactions varying from mild hyperemia to erosive gastritis have been reported to occur in the areas immediately surrounding these adherent particles.[2, 4, 5] This is reported to be particularly true in patients with peptic ulcer.[4]

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Regular aspirin crystals 24 hours after being mixed into water.

Calurin crystals in solution one minute after being mixed into water.

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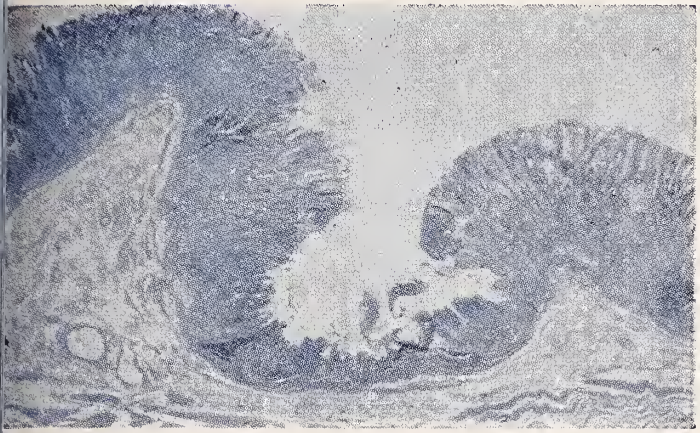
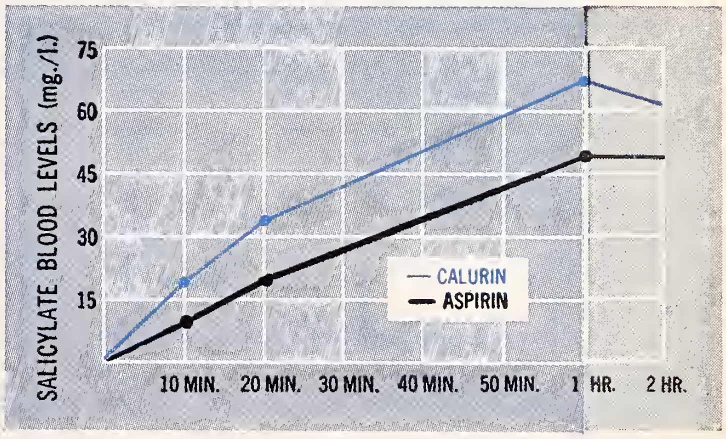


Particle-induced ulceration — section through lesion found in gastrectomy specimen. An aspirin particle was found firmly imbedded in this undermined erosion. Such lesions may be associated with the relative insolubility of aspirin, which remains in particulate form after dispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

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2 Produces high salicylate blood levels rapidly for prompt analgesic, antipyretic, anti-arthritic effect.

3 Sodium-free — for safer long-term therapy.

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Dosage: Each tablet of Calurin is equivalent to 300 mg. (5 gr.) of acetylsalicylic acid. For relief of pain and fever in adult patients, the usual dose of Calurin is 1 to 3 tablets every 4 hours, as needed; in arthritic states, 2 or 3 tablets 3 or 4 times daily; in rheumatic fever, 3 to 5 tablets 4 or 5 times daily. For children over 6 years, the usual dose is 1 tablet every 4 hours; for children 3 to 6 years, ½ tablet every 4 hours, as required. Not recommended for children under 3.

REFERENCES: 1. Waterson, A. P.: Aspirin and gastric haemorrhage, Brit. M. J. 2:1531, 1955. 2. Douthwaite, A. H., and Lintott, G. A. M.: Gastroscopic observation of the effect of aspirin and certain other substances on the stomach, Lancet 2:1222, 1938. 3. Editorial Comments: The effect of acetylsalicylic acid (aspirin) on the gastric mucosa, Canad. M. A. J. **80**:47, 1959. 4. Muir, A., and Cossar, I. A.: Aspirin and ulcer, Brit. M. J. 2:7, 1955. 5. Muir, A., and Cossar, I. A.: Aspirin and gastric haemorrhage, Lancet 1:539, 1959. 6. Schneider, E. M.: Aspirin as a gastric irritant, Gastroenterology **33**:616, 1957. 7. Bayles, T. B., and Tenckhoff, H.: Salicylate therapy in rheumatic diseases, Scientific Exhibit, Ann. Mtg. A. M. A., San Francisco, Calif., June, 1958. 8. Batterman, R. C.: Comparison of buffered and unbuffered acetylsalicylic acid, New Eng. J. M. **258**:213, 1958. 9. Cronk, G. A.: Laboratory and clinical studies with buffered and nonbuffered acetylsalicylic acid, New Eng. J. M. **258**:219, 1958. 10. Editorial: Aspirin plain and buffered, Brit. M. J. 1:349, 1959. 11. Smith, P. K.: Plasma concentration of salicylate after the administration of acetylsalicylic acid or calcium acetylsalicylate to human subjects, Report submitted to Smith-Dorsey from Dept. of Pharmacology, Geo. Washington Univ. School of Medicine, Washington, D. C., Sept. 5, 1958.

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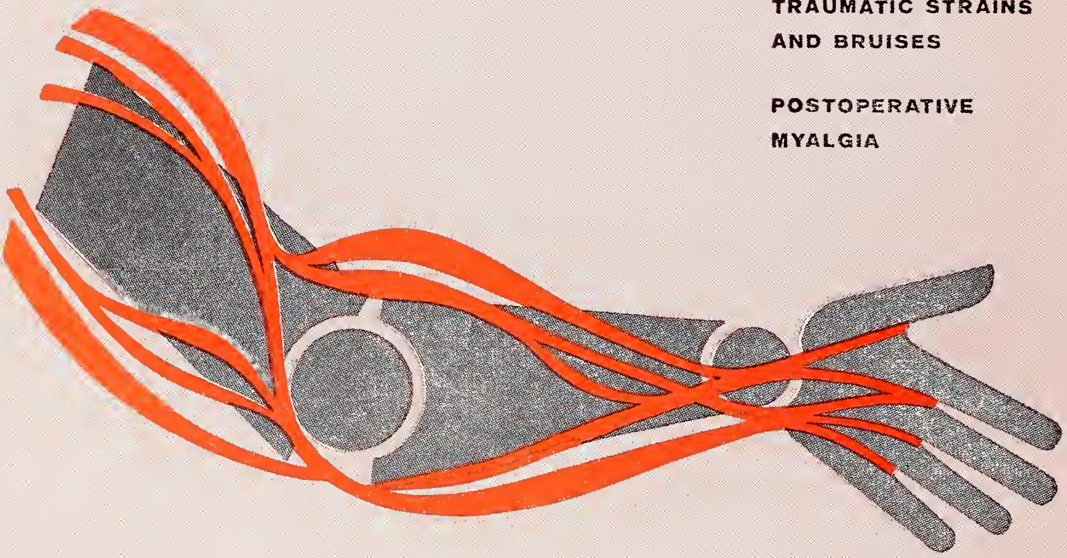

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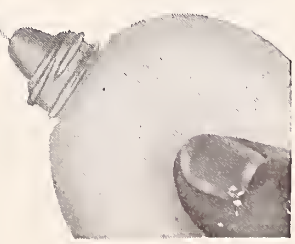

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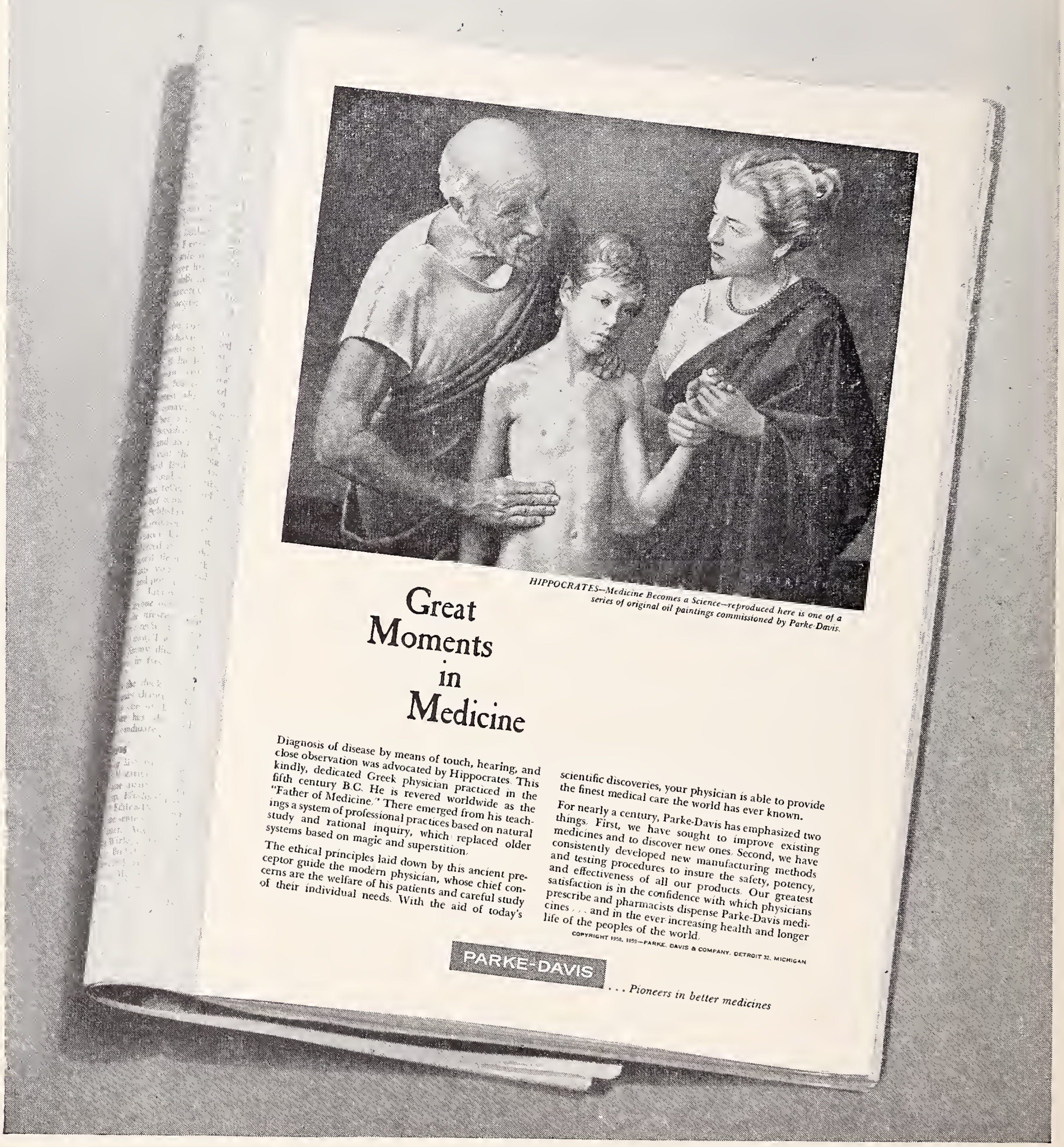

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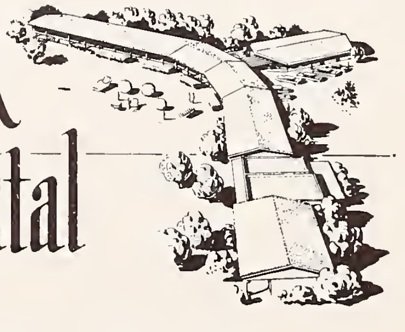

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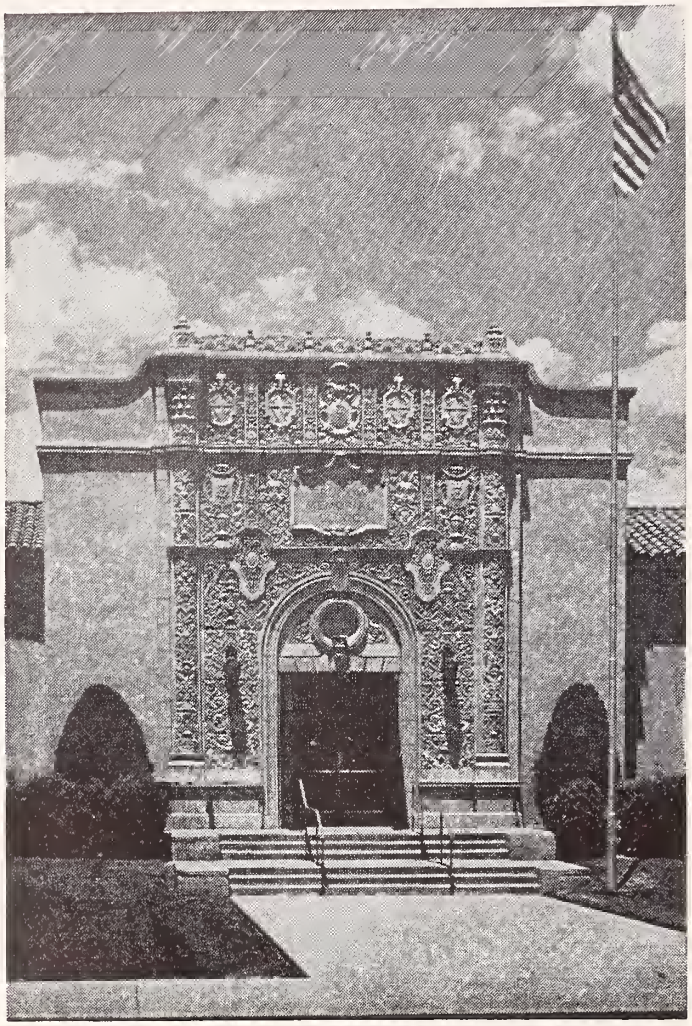

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(1) Rubin, A., and Babbott, D.: J.A.M.A. *168*:498, (Oct. 4) 1958. (2) Kinsey, A. C.; Pomeroy, W. B., and Martin, C. E.: Sexual Behavior in the Human Male, Philadelphia, W. B. Saunders Company, 1948.

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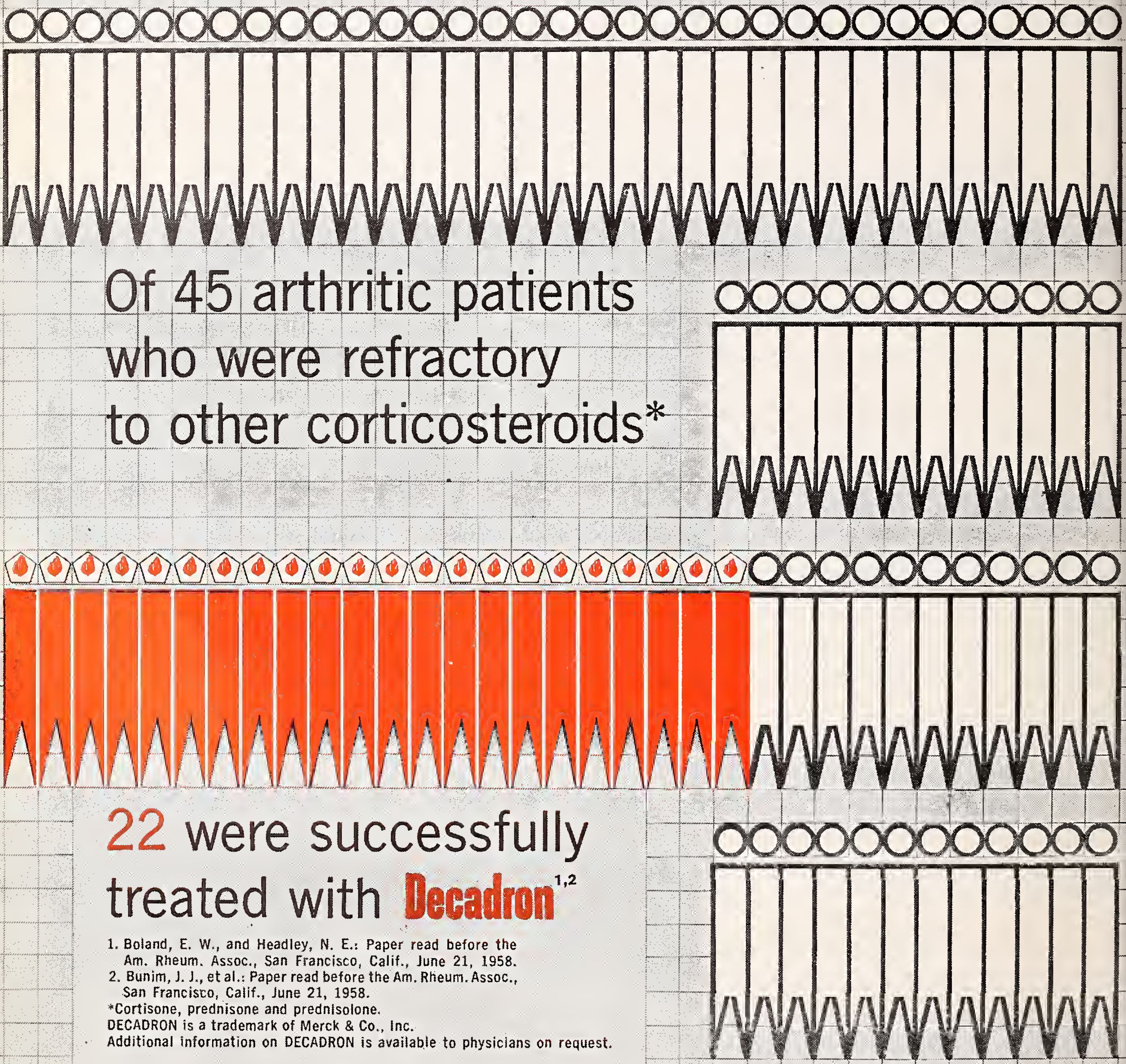

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1. Boland, E. W., and Headley, N. E.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
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ARIZONA MEDICINE

Journal of
ARIZONA MEDICAL ASSOCIATION

Vol. 16, No. 8 – August, 1959

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Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

(The Editors of the Journal assume no responsibility for opinions expressed in the articles contributed by individual members.)

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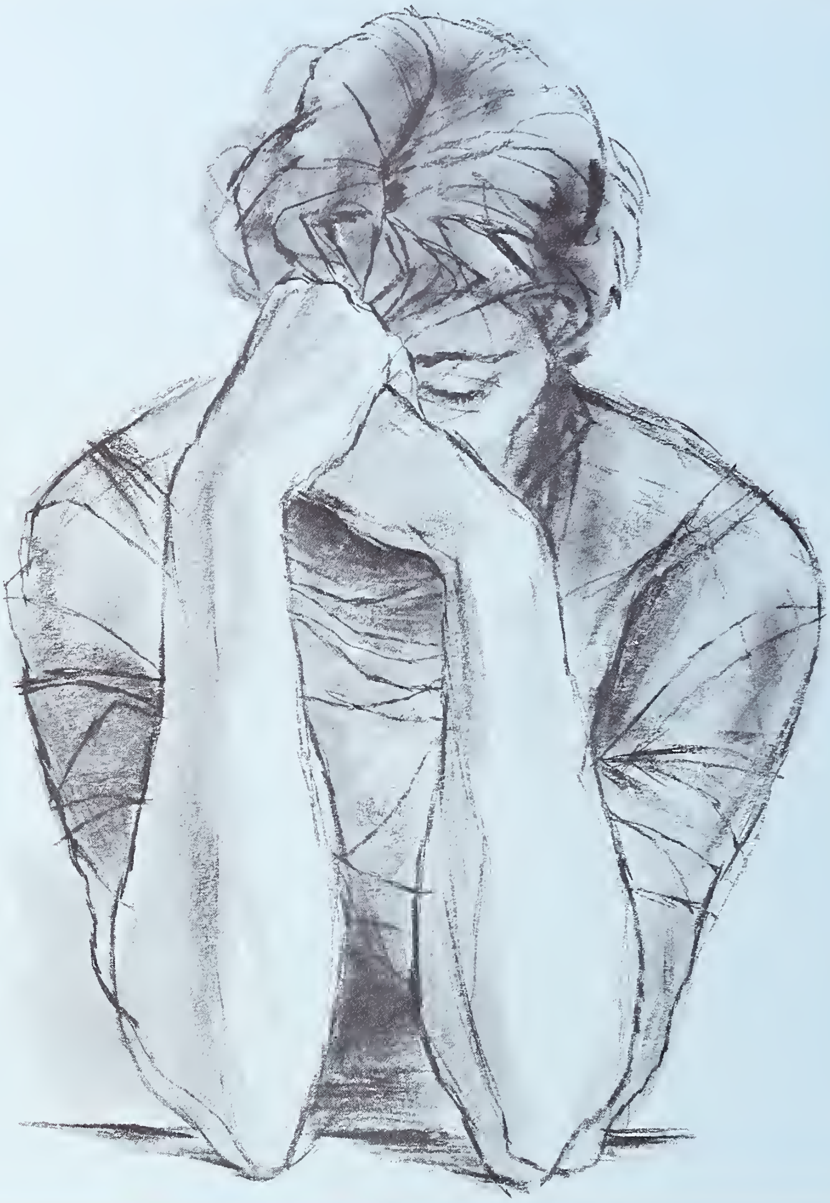

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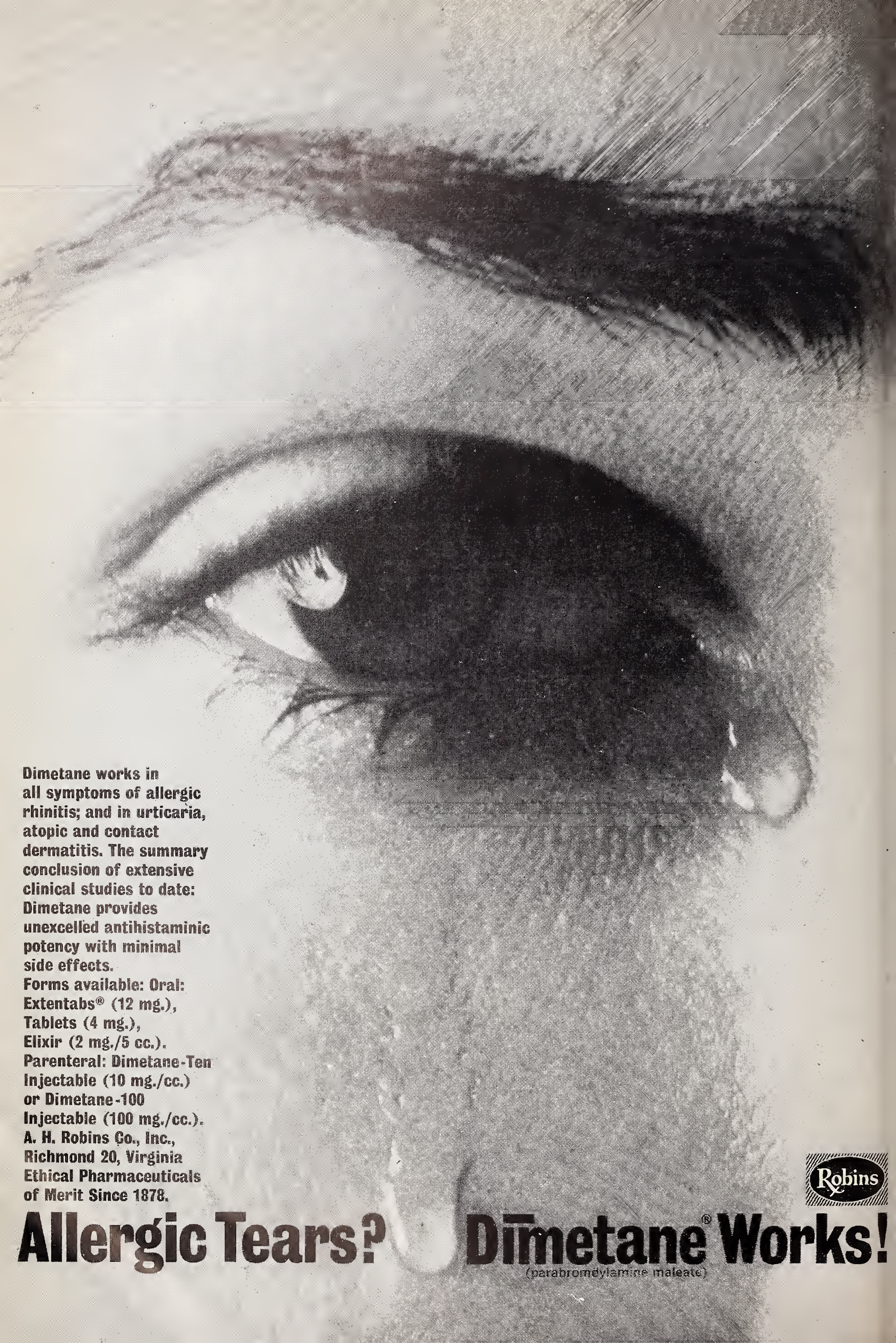
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References: 1. Sheldon, J. M.: Postgrad. Med. **14**:465 (Dec.) 1953. 2. Hubbard, T. F. and Berger, A. J.: Annals Allergy p. 350 (May-June) 1950. 3. Kline, B. S.: J. Allergy **19**:19 (Jan.) 1948. 4. Goodman, L. S. and Gilman, A.: Pharmacol. Basis Ther., Macmillan, New York, 1956, p. 532. 5. Fabricant, N. D.: E.E.N.T. Monthly **37**:460 (July) 1958. 6. Lhotka, F. M.: Illinois M.J. **112**:259 (Dec.) 1957. 7. Farmer, D. F.: Clin. Med. **5**:1183 (Sept.) 1958.

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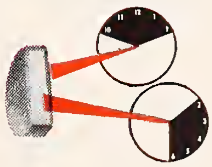

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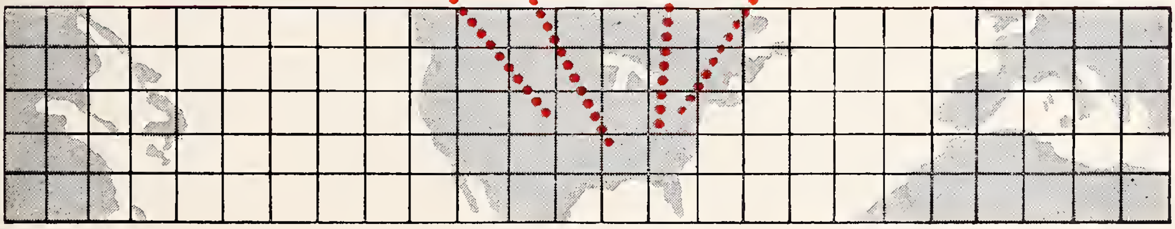

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References: 1. Smigel, J. O., et al.: J. Am. Ger. Soc., in press. 2. Freedman, A. M.: Pediat. Clin. North America **5**:573 (Aug.) 1958. 3. Ayd, F. J., Jr.: New York J. Med. **57**:1742 (May 15) 1957. 4. Menger, H. C.: New York J. Med. **58**:1684 (May 15) 1958. 5. Coirault, M., et al.: Presse méd. **64**:2239 (Dec. 26) 1956. 6. Bayart, J.: Presented at the International Congress of Pediatrics, Copenhagen, Denmark, July 22-27, 1956.

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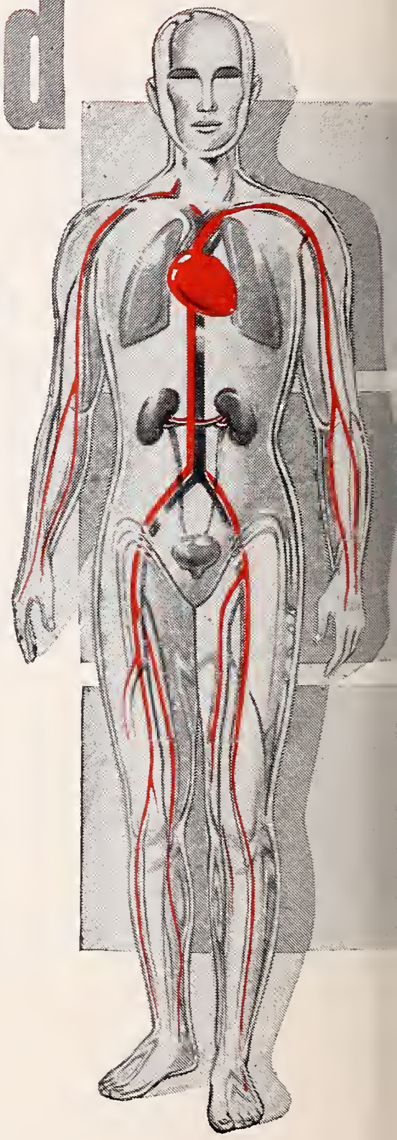

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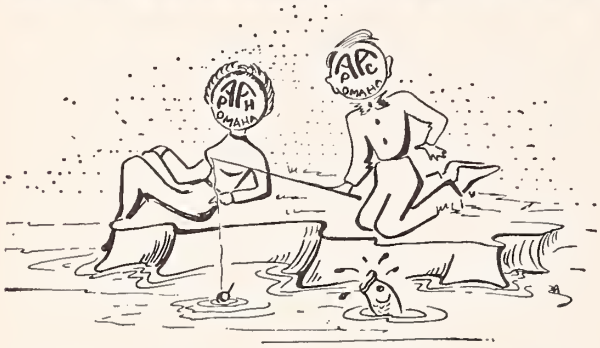

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*Rest, Edward J., and Todd, Wilbert R., Textbook of Biochemistry, 2nd Ed. (New York, Macmillan, 1955), p. 522; p. 1074-5.

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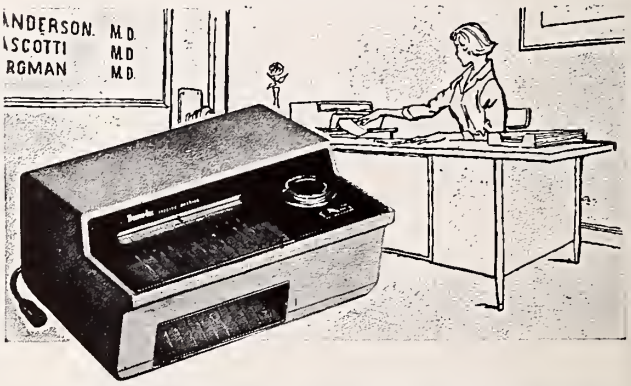
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Trancopal, 200 mg. t.i.d., was prescribed for dysmenorrhea. It not only has relieved the severe cramping, but has provided a welcome relief from the irritability accompanying it. Because of these excellent results, Trancopal also was prescribed for her tenseness during the premenstrual period with a most gratifying response.

This patient has successfully remained on the above regimen for over six months without adverse effects.

Turn Page for Complete Listing of Indications and Dosage

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Trancopal

potent muscle relaxant

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- Low incidence of side effects (2.3% of patients). Blood pressure, pulse rate, respiration and digestive processes unaffected by therapeutic dosage. No effects on hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications:

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Low back pain (lumbago, etc.)
Neck pain (torticollis, etc.)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome
Fibrositis
Ankle sprain, tennis elbow, etc.
Myositis
Postoperative muscle spasm

Psychogenic:
Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
Alcoholism

Trancopal Caplets
100 mg. (peach colored, scored), bottles of 100.

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

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[1] Collective Study, Department of Medical Research, Winthrop Laboratories.

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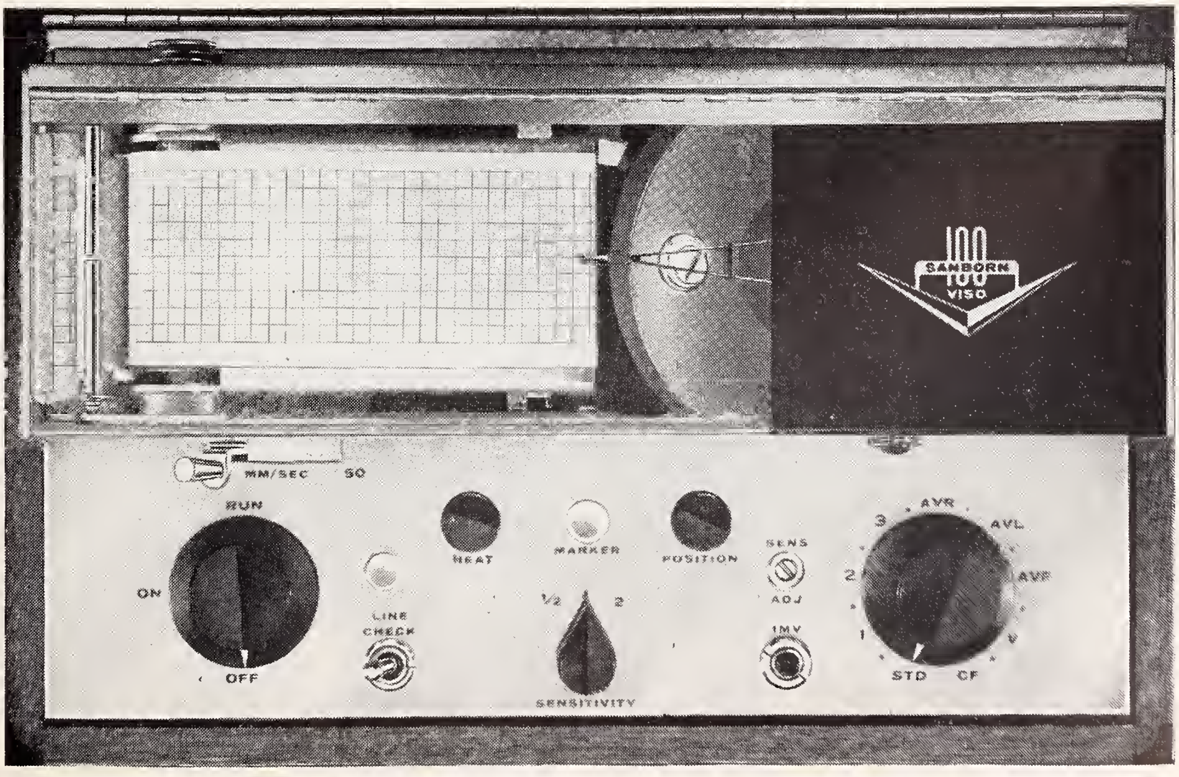

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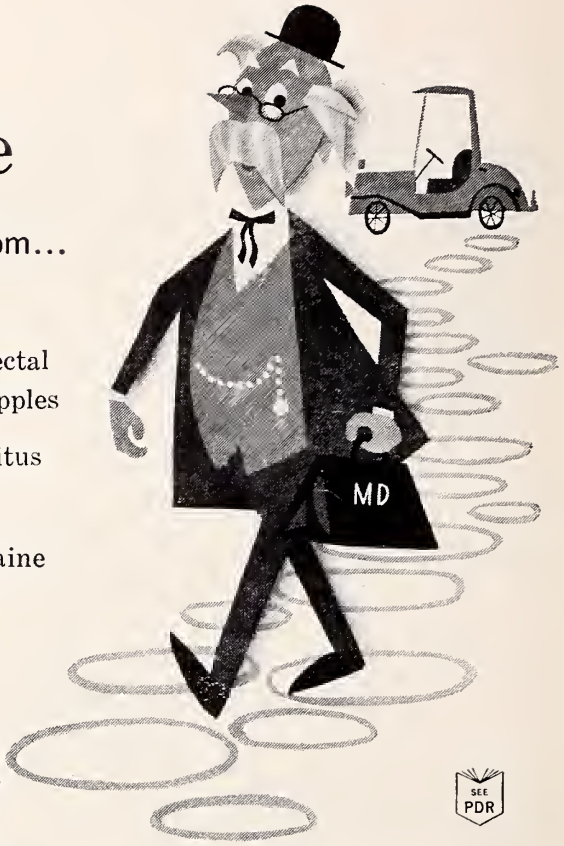

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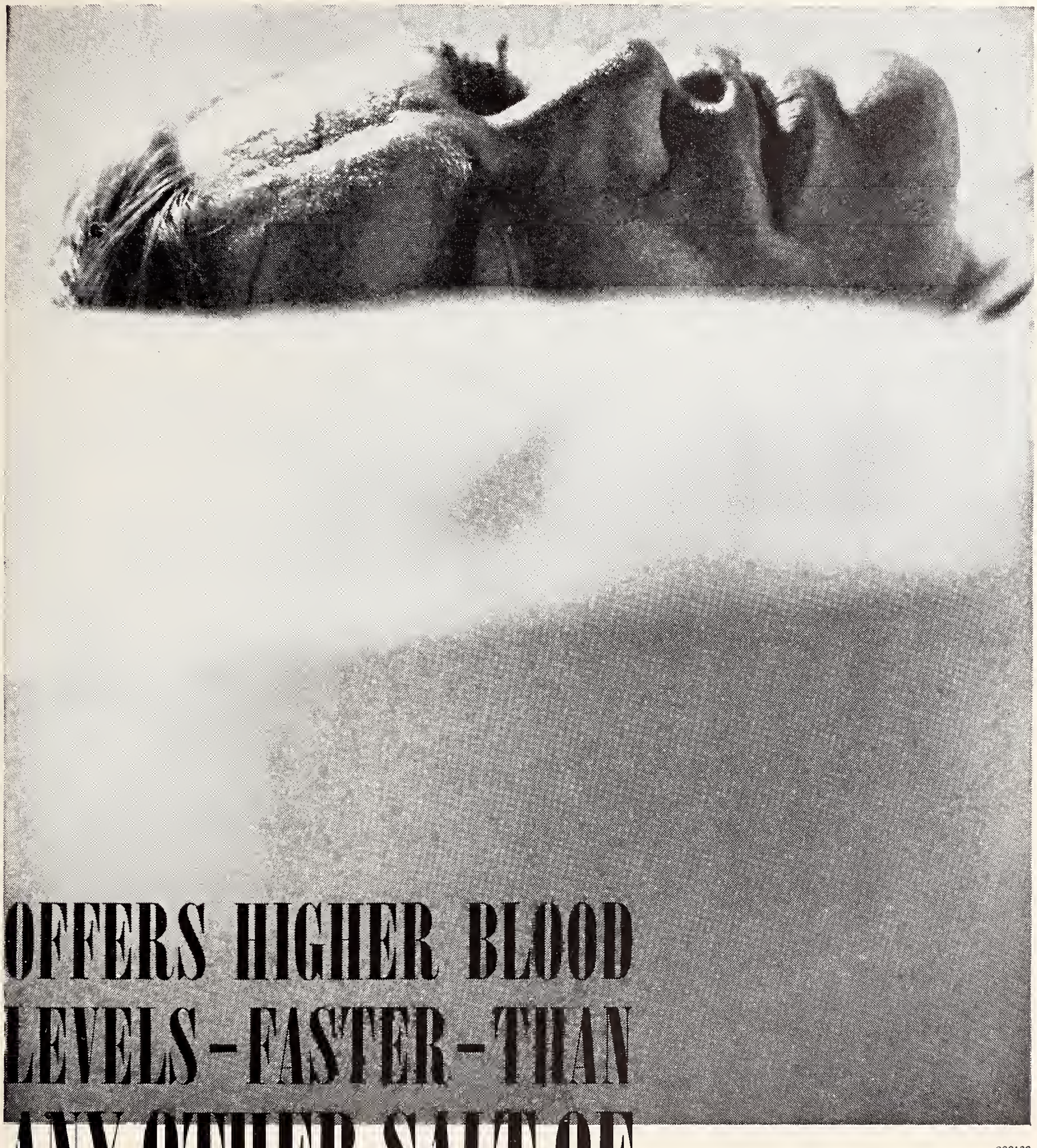

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References: 1. Menger, H. C.: Clin. Med. 4:313 (March) 1957. 2. Charles, G. M.: Geriatrics 2:110 (March) 1956. 3. Shuster, B. H.: M. Clin. North America 40:1787 (Nov.) 1956. 4. Dolowitz, D. A.: Rocky Mountain M. J. 55:53 (Oct.) 1958.

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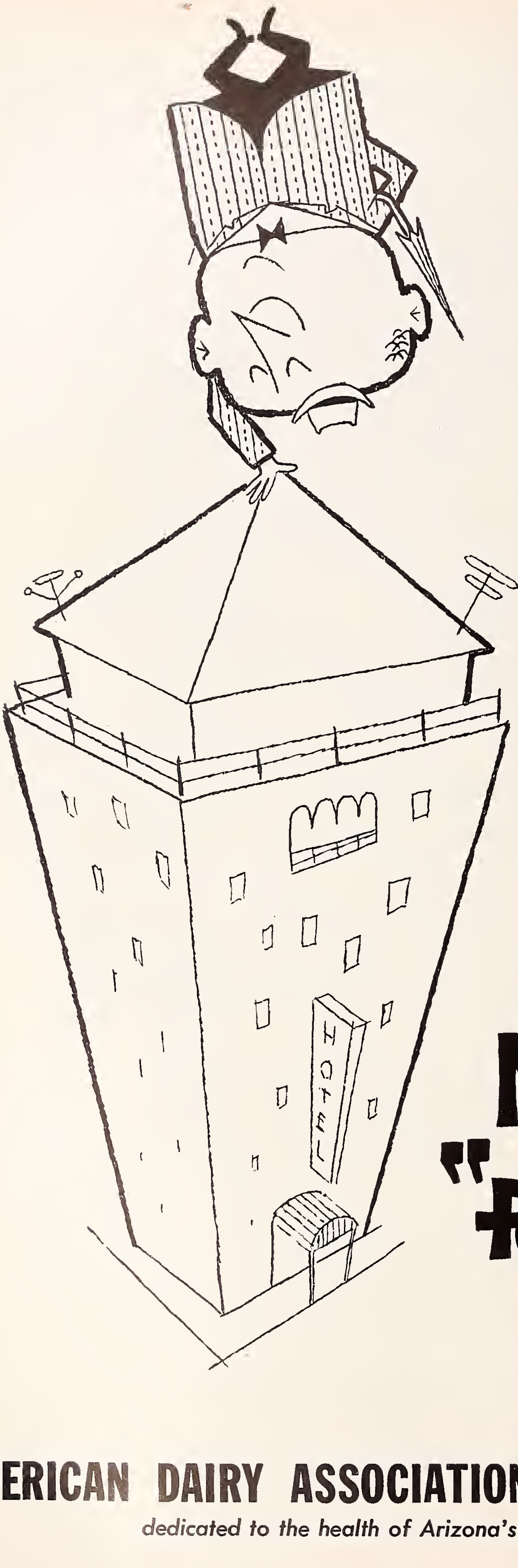

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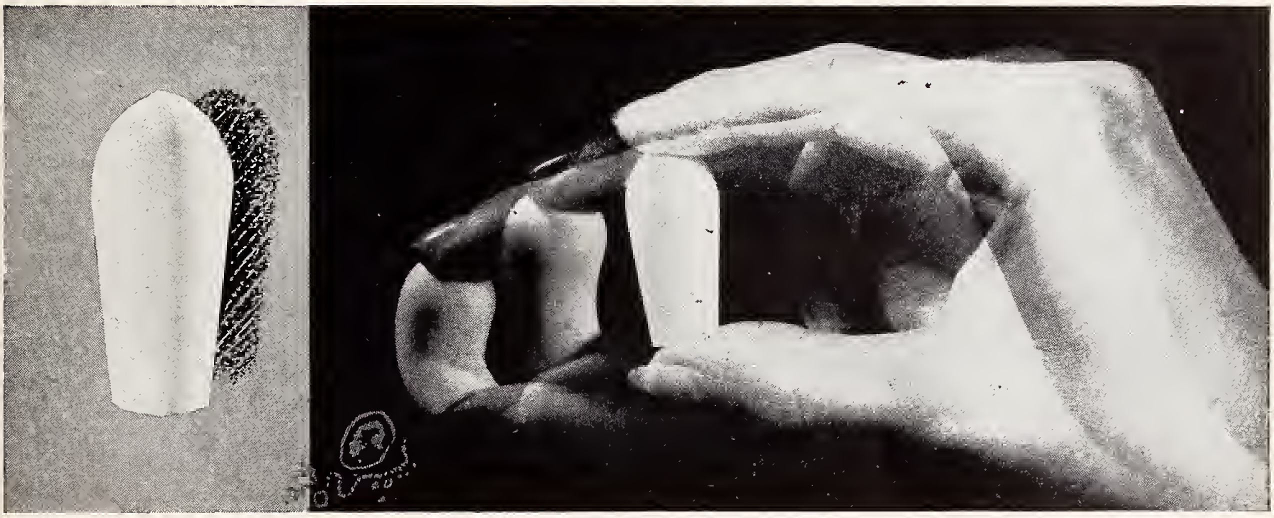

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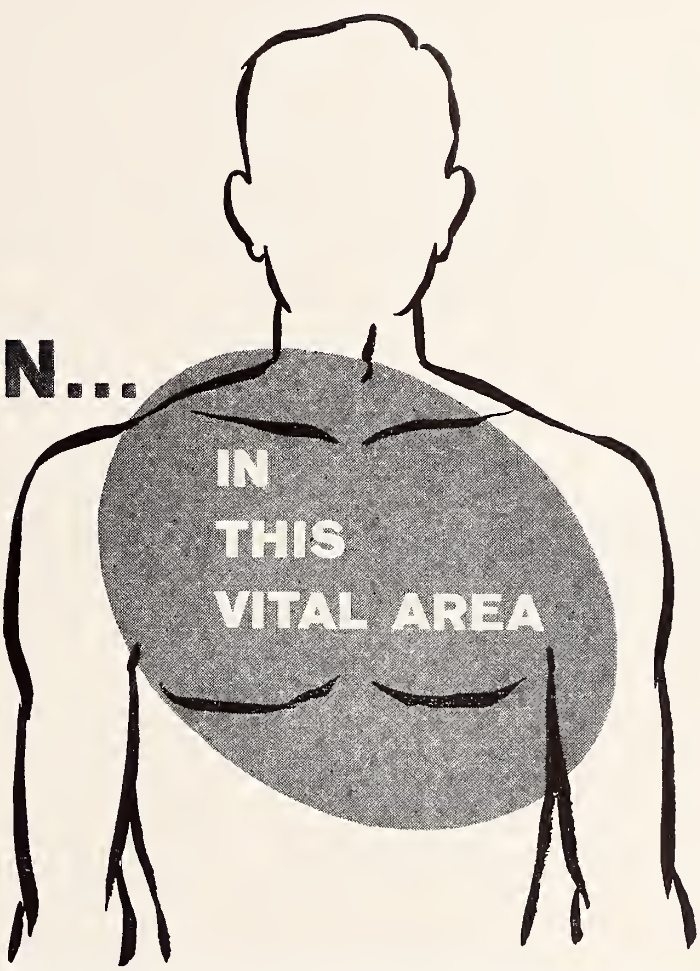

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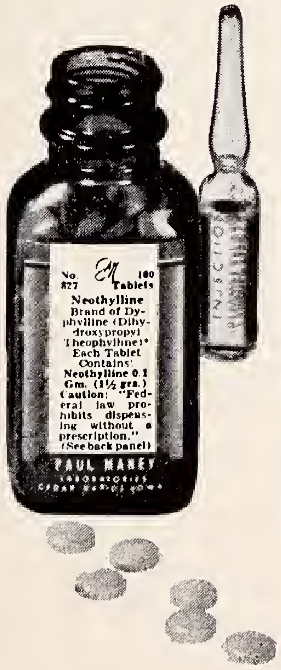
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Acetylsalicylic acid	325 mg.
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Ascorbic acid	20 mg.

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References: **1.** Spies, T. D., et al.: J.A.M.A. 159:645, 1955. **2.** Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. **3.** Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. **4.** Guerra, F.: Fed. Proc. 12:326, 1953. **5.** Busse, E. A.: Clin. Med. 2:1105, 1955. **6.** Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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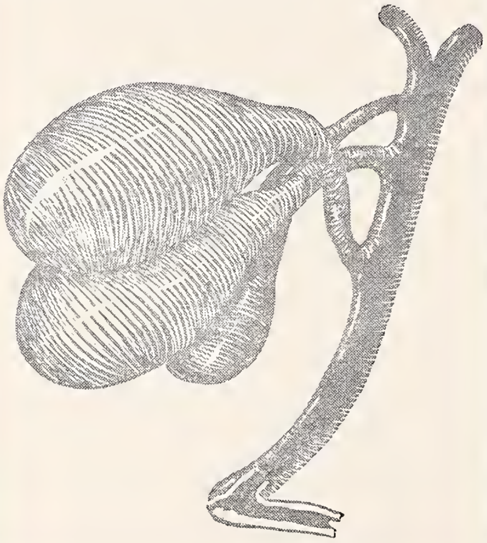
Source: Skilboe, B.: Am. J. Clin. Path. *30*:252, 1958.



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(1) Beckman, H.: Drugs: Their Nature, Action and Use, Philadelphia, W. B. Saunders Company, 1958, p. 425.
(2) Biliary Tract Diseases, M. Times *85*:1081, 1957.

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A major advance in the treatment of mental depression came with a newer understanding of the influence of brain serotonin and norepinephrine on the mood. Levels of both these neuro-hormones are decreased in animals under experimental conditions analogous to depression; relief of these model depressions is seen with a rise in the levels of both serotonin and norepinephrine.

A second advance came with the development of monoamine oxidase inhibitors, substances which raise the cerebral level of both serotonin and norepinephrine. The first of the amine oxidase inhibitors raised the cerebral level of serotonin, but did not appear to raise that of norepinephrine levels proportionately.

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NIAMID is available in: 25 mg., pink, scored tablets in bottles of 100; and 100 mg., orange, scored tablets in bottles of 100.

References

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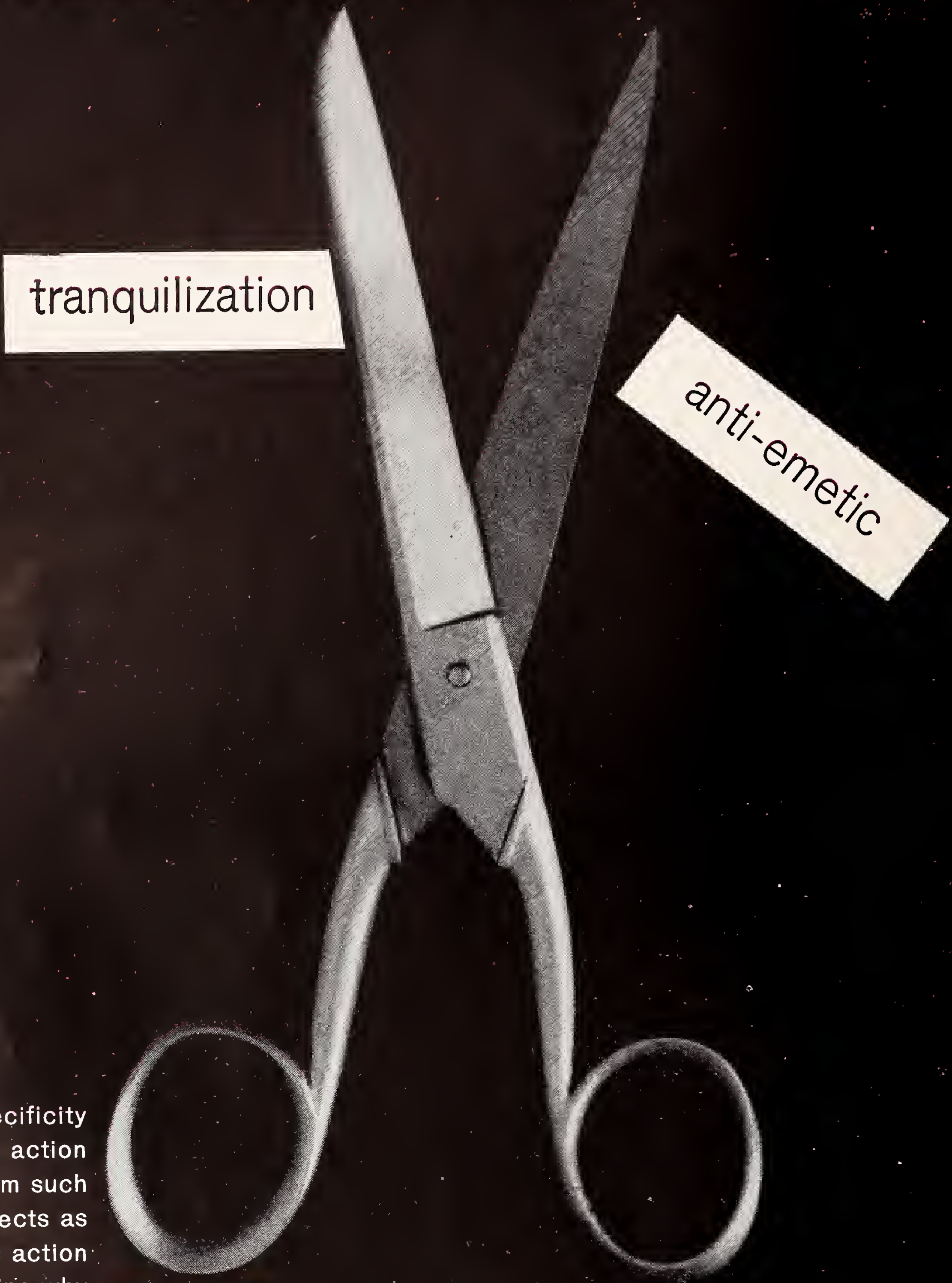

greater specificity
of tranquilizing action
—divorced from such
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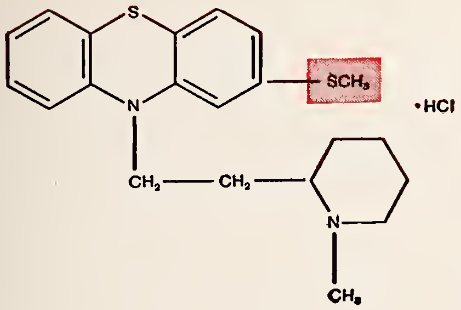
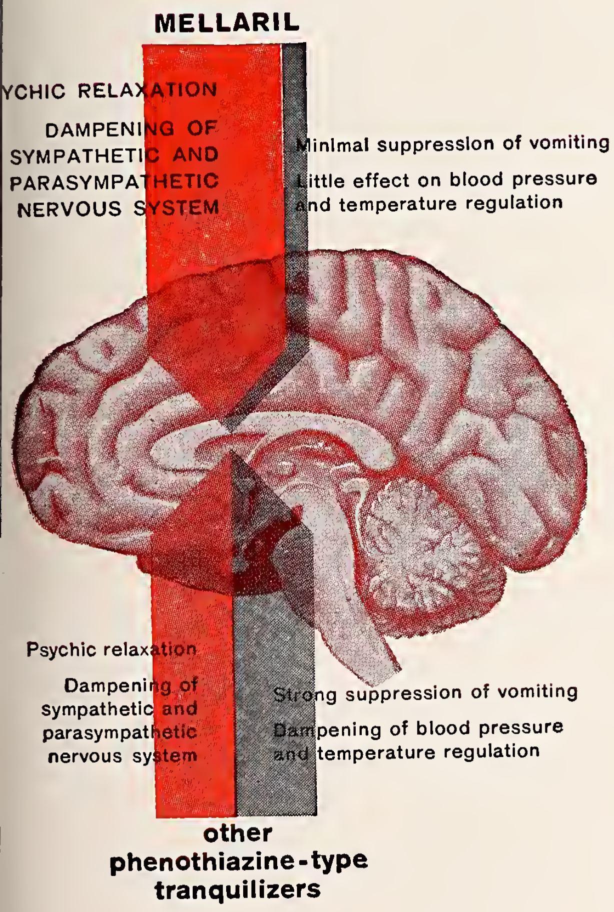


The presence of a thiomethyl radical (S-CH_3) is unique in Mellaril and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by: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1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

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4 Lack of impairment of patient's normal drive and energy.

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INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
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MILD—where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
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SEVERE—in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
CHILDREN: BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

MELLARIL Tablets, 10 mg., 25 mg., 100 mg.

*Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959

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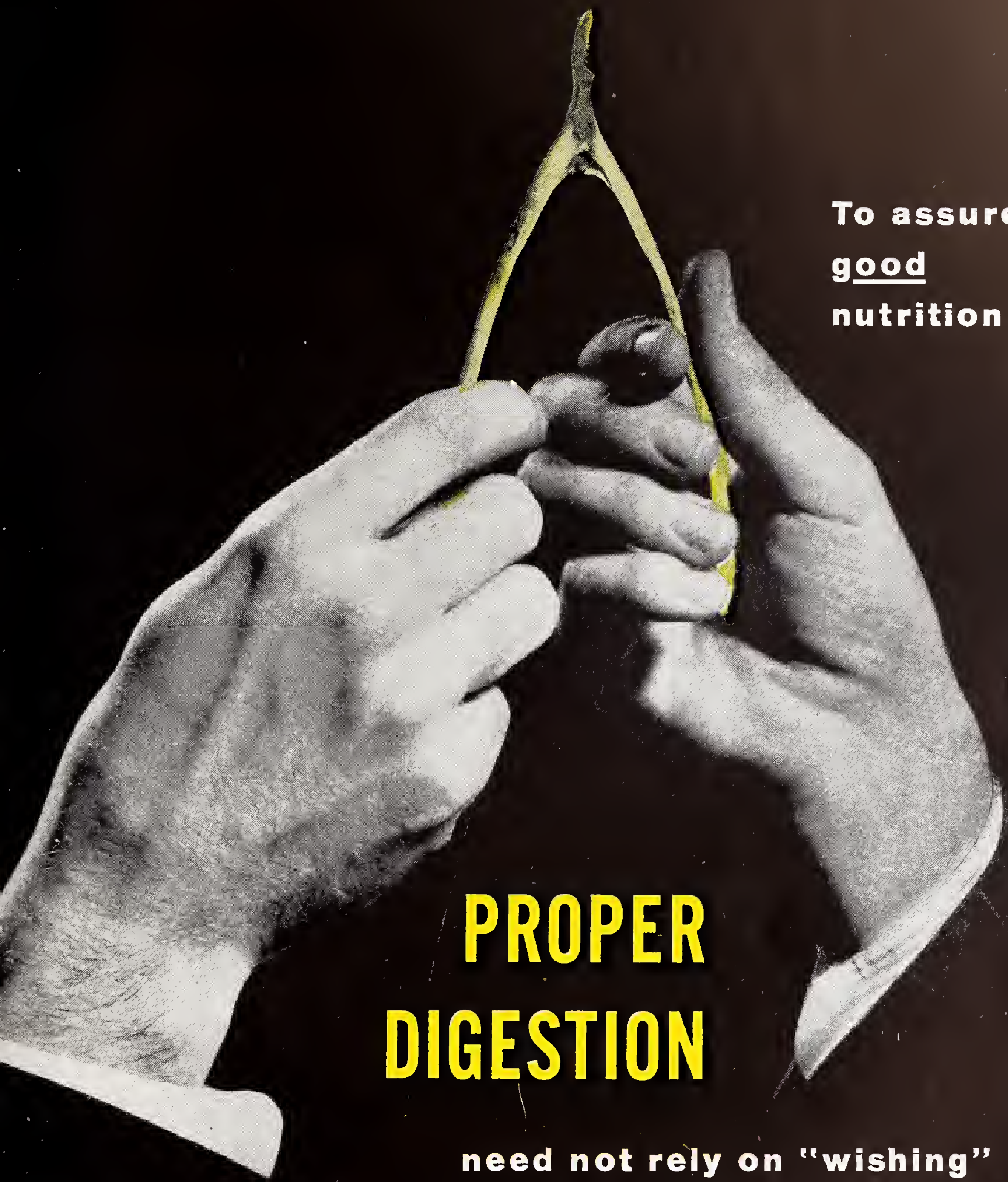

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"Itch completely gone -- dramatic relief!"

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Chronic bronchial asthma (male, 62)

"This patient, on his own and his wife's admission, is better, has had more relief than he has had in 35 years..."

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"Marked diminution of symptoms since onset of therapy." (Dosage: one tablet t.i.d.)

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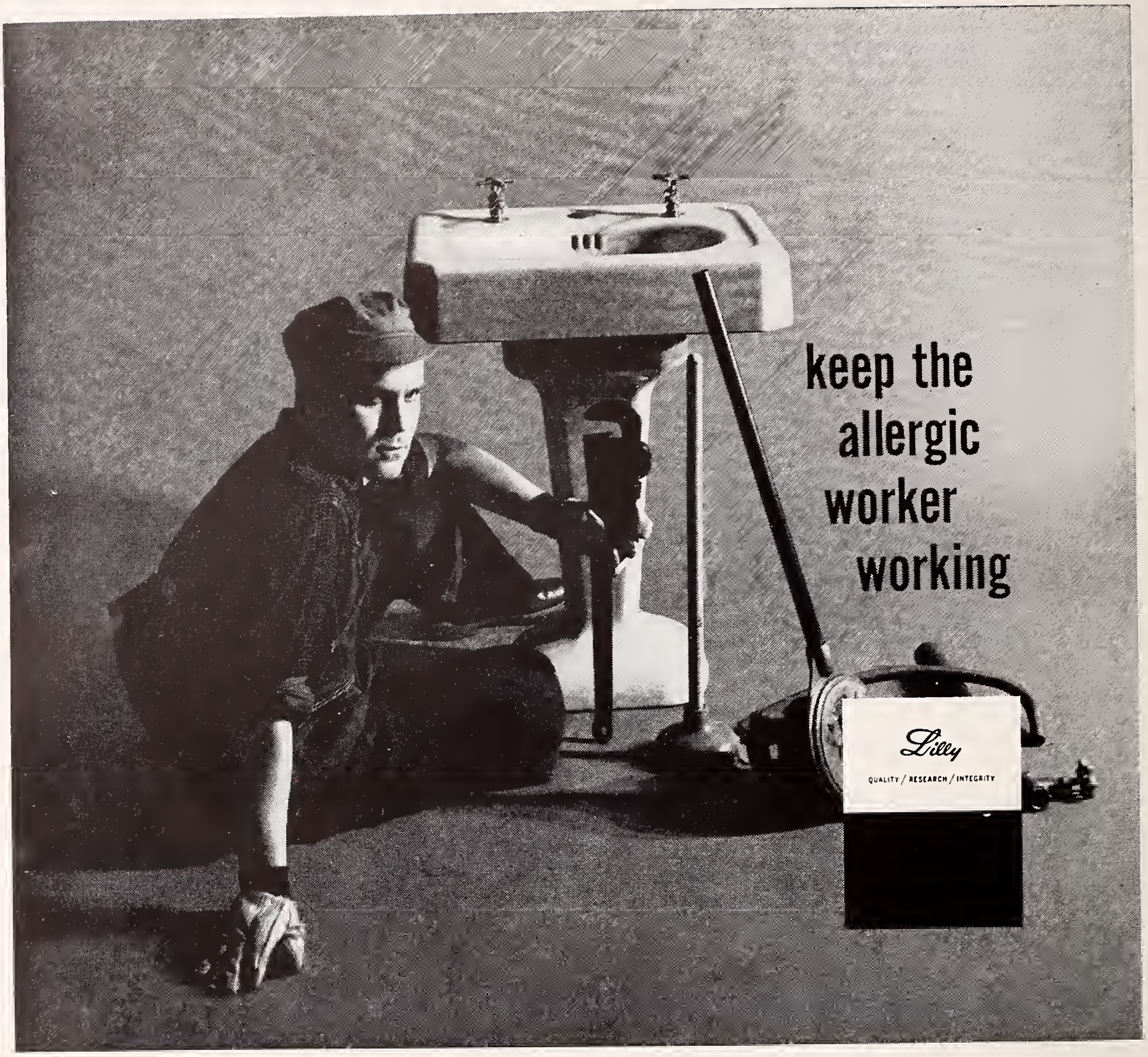
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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 8 AUGUST, 1959

Original Articles

AMEBIASIS: TREATMENT WITH A NEW AMEBACIDAL AND ANTIBACTERIAL AGENT

By Raymond F. Oyler, M.D.*
Tucson, Ariz.

AMEBIASIS, especially in subacute or chronic forms, is much more common than is ordinarily suspected. In the United States alone, over 2 million people suffer from this disease and 10 per cent or more of the population are carriers(1).

Moreover, amebiasis is not confined entirely to the warmer climates, as is rather commonly believed. According to Faust(2), it is ". . . cosmopolitan in its distribution . . ." and "has been found wherever coprological surveys have been made on the human population, from Saskatchewan, Canada (52 degrees 30 minutes N.) to the Straits of Magellan (52 degrees S.)."

From a worldwide standpoint, the number of people harboring this disease must be staggering. Since signs and symptoms of chronic amebiasis – anorexia, headache, secondary anemia, pruritis ani and proctitis, impairment of liver function, nervousness and vague abdominal discomfort – simulate those of various other disease states, it is probable that untold numbers of cases go unrecognized.

Definitive diagnosis of amebiasis, while technically simple enough in experienced hands, is practically a great problem. First, one must realize the possibility of its presence in areas of temperate climate and in persons who have never lived nor traveled in the tropics or subtropics. Next, examination of several freshly collected liquid stool specimens is imperative before amebiasis is excluded from further diagnostic consideration. Further, it must be kept in mind that for a time shortly after episodes of dysentery or diarrhea, stool specimens may be "negative" simply because relatively few parasites are left in the *lower* intestinal tract; this may also be the case temporarily after a course of treatment, introducing additional possible error in diagnosing or establishing a cure of amebiasis. Definitive procedures should, therefore, allow time for proliferation of perhaps temporarily depleted numbers of E. histolytica, and be based upon repeated stool examinations upon "hot" specimens collected at the office or clinic following saline purgation.

Intestinal amebiasis tends to become chronic even after an acute initial episode, and indeed may be entirely insidious in onset and later course; often it is associated with bacterial intestinal disease, and additional intestinal parasitism may further vary the pathologic and clinical pattern. Wide differences in host tolerance to amebic infestation, with problems of reinfestation or false "cures," add to the foregoing factors to account for the continuing search for more effective and better tolerated amebacidal drugs, especially those having antibacterial action also.

---

*Thomas-Davis Clinic.

One of the newer compounds having amebacidal, protozoacidal and antibacterial action is 4,7-phenanthroline-5,6 quinone (Ba-9837)[**] and has this structural formula:

In vitro, Ba-9837 showed amebacidal action at a concentration of 1:16,000, with antibacterial activity as follows:

Bacterial Strain	*Bacteriostatic Concentrations*
Staph. Aureus	1:200,000
Strept. Hemorrhag.	1:200,000
Strept. Fecalis	1:200,000
Esch. Coli	1: 20,000
Salm. Typhi	1:100,000
Paratyphus	1: 20,000

In vivo, utilizing rats artificially infected with E. histolytica, the following amebacidal activity was found in the cecum:

In dogs and rats, the compound was well tolerated acutely and subacutely in dosages far above those used clinically. It is of interest that a metabolite of Ba-9837 is itself at least as potent as the original substance, and is found in high, amebacidal concentrations in bile and urine of experimental animals under treatment with the compound.

Full details of experimental findings with this and related phenanthroline compounds have been reported by Kradolfer and Neipp(3).

Ba-9837 has been under clinical study in Europe, Asia and Africa for over two years; publications confirming its effectiveness against intestinal amebiasis have appeared in the literature(4,5).

Patient Group

Ba-9837 was administered to a total of 135 patients ranging in age from 14 to 76. Diagnosis was established, after history-taking and general physical examination, by stool examinations (repeated at least three times before exclusion of amebiasis), anoscopic and sigmoidoscopic examinations.

As each successive case was diagnosed, it was advised that all members of the immediate family be examined; in this way multiple cases were found in several families. Although quite a few detected in this way had reported no symptoms, during the course of treatment some of them volunteered that they had experienced relief of constipation, excessive gas, abdominal distention and vague abdominal discomfort. They had not considered these problems significant enough to have consulted a physician about them previously.

Those patients reporting signs and symptoms noted the following, in order of frequency:

Intestinal gas and bloating	57
Diarrhea alternating with constipation.	27
Constipation	22
Diarrhea	20
Pruritus ani	19
Easy fatigability	19
Rectal bleeding and irritation	13
Occasional loose stools	11
Dizziness	9
Tenesmus	8
Weight loss	8
Headache	7
Weakness	6
Nausea	5
Mucus with diarrhea	4
Nausea and vomiting	4
Mucus with normal stools	2
Rectal abscess	1
Dysentery	1

Localized areas of tenderness were noted as follows:

RLQ	50
Hepatic area (fist percussion)	15
Abdominal, generalized	11
R&LLQ	7
Epigastrium	5
LLQ	4

In two patients ulcerations were seen per sigmoidoscope and in six, per anoscope.

Dose mg./kg. orally	*Duration of Treatment*	*No. Animals*	*Amebia in Cecum*		
			Neg.	*1+*	*2+*
50	5 days	12	11	1	0
75	5 days	11	11	0	0
Control		29	9	7	13

[**] Outside continental United States, previously designated Ba-11925C and now known as Entobex (supplied by CIBA Pharmaceutical Products Inc., Summit, New Jersey).

Among the entire group of patients, discontinuation of medication was necessary for only one, this because of development of a skin rash that cleared promptly upon withdrawal of Ba-9837.

Only minor complaints occurred in a few other patients, namely increased gas and abdominal discomfort during therapy. These difficulties were readily controlled by a bland diet and antispasmodic medication.

Urinalyses and white blood cell counts remained normal throughout.

As is more or less to be expected, some of the original group of patients failed to return for adequate follow-up; it need only be remarked in passing that among these were some apparent successes and some apparent failures, but none reported side effects.

Among the group sufficiently co-operative to be evaluated fully, results were as follows with an average dosage per course of 100 mg. t.i.d. for seven days.

A. Of 43 patients having prior anti-amebic therapy at some time, 19 became negative on one course of Ba-9837***; 19 became negative on two courses (14-day interval between courses); four became negative on three courses; one became negative on four courses.

B. Of 36 patients with no prior antiamebic therapy, 16 became negative on one course of Ba-9837; 16 became negative on two courses, and four became negative on three courses.

C. Six other patients were resistant to three or four courses of Ba-9837.

Of the patients whose stools became negative upon this therapy, six continued to have some of their presenting symptoms, although to a lesser degree. In circumstances such as these, an extended follow-up is advisable.

It is interesting to note that a high degree of resistance to therapy was present in patients with associated diverticulosis and diverticulitis. This probably is on the basis of greater physical "isolation" of the parasites from the drug present in the intestinal tract. In such cases it is advisable to use a highly active lumen-sterilizing drug with BA–9837.

Summary

The eradication of Endameba histolytica from the intestinal tract in most cases is a very difficult undertaking. This eradication has been considered to have been reasonably well established only after four serially negative and properly collected stool specimens have been thoroughly examined. Applying this standard as well as clinical criteria throughout, we were highly pleased with the rate of eradication of amoeba from the intestinal tract and of symptomatic improvement. We were likewise impressed by the fact that the compound was effective in many cases previously resistant to all other amebacidal drugs used in various combinations. Last but not least, Ba-9837 was very well tolerated in general.

* * *

The author acknowledges with gratitude the invaluable professional and technical assistance of Miss Lucille Hambley, R.N., and Mr. E. A. Balmer, B.S., Laboratory Director of the Thomas-Davis Clinic. The active co-operation of the Clinical Investigation Division of CIBA Pharmaceutical Products, Inc., also is much appreciated.

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***Therapeutic dosage of Viroform® was given for a few days afterward as a precaution.

DETECTION OF CANCER OF THE SINUSES AND LARYNX BY X-RAY EXAMINATION*

By Ross Golden, M.D.
Los Angeles, California

MY ASSIGNMENT is to present a brief discussion of the contribution of x-ray methods of examination to the detection of cancer of the paranasal sinuses and of the larynx.

Sinuses

The paranasal sinuses are holes in certain bones of the head filled with air and lined by very thin mucus membrane. They are frequently the site of inflammation and occasionally of malignant disease. Either type of disease results in displacement of air by soft tissue structures such as thickened lining membrane or tumor masses, and thereby produces recognizable abnormalities on x-ray films of the sinuses. The most frequent site of involvement by malignant disease is the maxillary sinus.

X-ray examination of the sinuses requires at least four exposures, in each of which the x-ray beam traverses the head in a different direction. It is not infrequently necessary to take stereoscopic films in at least one of these projections, particularly when destruction of bone by malignant disease is suspected. Because of superimposed bone shadows it may be necessary to make "body section" films of the sinuses in one or more projections. These "planigrams" or "laminograms" are made by simultaneous movement of the tube and the film in opposite directions during the exposure, with the part being examined placed in the proper position between the tube and the film. Time does not suffice for further explanation of this useful but too infrequently used method.

First, it is necessary to determine whether disease exists. Second, it is necessary to differentiate between inflammation and a malignant neoplasm. This differentiation may be extremely difficult and may require more than one examination of the suspected area.

Malignant disease usually invades the wall of the involved sinus and replaces the bone. In rare instances a purulent infection of a frontal sinus may invade the adjacent portion of the frontal bone and cause osteomyelitis. This type of bone destruction in my experience does not simulate in appearance the effect of malignant disease. I have never seen inflammatory disease produce bone destruction around the maxillary sinuses. Unfortunately, a malignant tumor of a maxillary sinus is practically always accompanied by infection. Therefore the differentiation by x-ray methods of examination between infection per se and malignant disease plus infection depends upon the absence or presence of bone destruction. If a mass can be seen in the nasal passage, biopsy should, of course, be done.

Destruction is manifested by loss of sharpness of edge of a bone, by extension of an area of diminished density from the edge into a bone, or by an area of diminished density within a bone.

Primary malignant tumors may arise in the posterior nasopharynx and produce abnormal masses which are outlined by the air in the nasopharynx and are visible on the lateral view. Soft tissue masses are usually present in the posterior nasopharynx of children and appear as lobulated contours outlined by air. They are masses of lymphoid tissue. Adenoids are extremely rare in adults. If a soft tissue mass is seen in an adult along the posterior nasopharynx, the possibility of primary malignant disease must be suspected. It is then advisable to make lateral planigrams of this area looking for evidence of destruction of the adjacent portion of the sphenoid bone. In some instances planigrams in the anteroposterior projection may be needed. Malignant disease arising in the nasopharynx may invade one or both sphenoidal sinuses. The radiologist should not fail to look for abnormal soft issue masses in the posterior nasopharynx when an examination of the sinuses is done.

Larynx

X-ray examination of the larynx should be done by lateral stereoscopic projections and by body section films in the anteroposterior projection. Without planigraphy in the anteroposterior projection, the superimposed shadows of the cervical vertebrae make it impossible to identify the structures of the larynx. Planigrams should be taken with and without phonation to show whether the two vocal cords move symmetrically. With the new fluoroscopic amplification devices, movement of the larynx can be studied with very little radiation exposure. To look for evidence of extension of malignant disease into the upper part of the esophagus and the piriform sinuses, appropriate examinations with barium should be done.

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*From the Department of Radiology of the University of California at Los Angeles. Presented at the Sixth Annual Cancer Seminar, Tucson, January 1958.

Time does not suffice for an anatomical description of the larynx. The x-ray examination discloses (1) the calcium deposited in the laryngeal cartilages and (2) the contours of certain soft tissue structures outlined by air.

Calcification of the Larynx

X-ray studies of the human larynx from cadavers were made in Germany within a few months after the announcement of Roentgen's discovery of the X-ray. The objective of this investigation was to demonstrate the calicification of the larynx. Subsequent studies have shown that the calcification of the larynx is quite different in the male from that in the female.

In the *male,* the laryngeal cartilages actually ossify and produce trabeculated bone. For this reason the arytenoid cartilages cannot be distinguished from the superimposed ossification of the thyroid cartilages. Furthermore, in the male, the ossification apparently begins along the posterior inferior part of the thyroid cartilage, extends forward across its lower margin and then up and back along the upper margin. The result is to leave an unossified area of diminished density in the center of the thyroid cartilages which has been confused with bone destruction resulting from malignant disease. This unossified area gradually diminishes in size.

In the *female* larynx, the calcium is deposited in small, irregular spots or irregular streaks, varying in size and shape from place to place. The arytenoid cartilages become densely calcified, not ossified, and stand out very clearly on the lateral view. In fact, when the projection happened to superimpose the shadows of the two arytenoid cartilages, they have been mistaken for a foreign body.

In the male larynx, it is difficult and in the female larynx it is practically impossible to recognize destruction of the laryngeal cartilages by a carcinoma.

Soft Tissue Structures

The soft tissue structures which the x-ray film should show are: (1) the glottis; (2) the valleculae; (3) the aryepiglottic folds; (4) the margins of the vestibule; (5) the ventricles with the ventricular folds or false cords above, the vocal cord below, and the "chink" between them; (6) the tracheal air column outlining the shape of the upper end of the trachea.

The lateral view of the female larynx almost invariably shows the laryngeal ventricles which are air-filled spaces between the true cords and the ventricular folds. They appear as bands of air density extending in an anteroposterior direction. The lateral view rarely shows the ventricles in the male unless the larynx is filled with air under pressure. This is presumably because the ventricles slant upward as they pass from the lateral side toward the laryngeal vestibule.

Diseases of the Larynx

The larynx may be involved by inflammatory or by malignant disease. Because of the ease with which the larynx can be examined by direct inspection with a mirror or a laryngyscope, the abnormality produced by a disease can usually be detected without x-ray examination. However, by direct inspection the walls of the trachea just below the laryngeal chink cannot be seen. For this reason x-ray examination may give information not obtainable otherwise. It is desirable for the laryngologist to know whether malignant disease which may arise in the vocal cords, in the upper end of the esophagus or in a piriform sinus has involved the wall of the trachea. A benign polypoid tumor may lie below the larynx in the trachea; when the patient exhales it may be propelled upward into the laryngeal vestibule. This evidence of mobility strongly suggests that the lesion is benign.

Malignant disease arising in the larynx may extend into the piriform sinuses or even into the esophagus. Therefore, examination of the upper part of the esophagus with barium should invariably be done. Deformity of a piriform sinus can usually be demonstrated in the anteroposterior projection without difficulty.

Summary

X-ray examination of the sinuses when malignant disease is suspected may disclose the presence of bone destruction and show its extent. This is important for the surgeon if he is going to operate, or for the radiotherapist if radiation therapy is to be given.

The larynx is easily examined by direct vision. X-ray examination, therefore, may give little additional information. However, it may disclose evidence of extension of the disease beyond the portion of the larynx visible through the laryngyscope.

CAUSALGIC PAIN — A COMMON ENTITY*

By J. Cuthbert Owens, M.D.
University of Colorado School of Medicine
Department of Surgery

FOLLOWING any injury to an extremity, whether accidental or surgical, infectious or non-infectious, venous or arterial, peripheral nerve or not, a bizarre symptom complex called causalgia occasionally occurs. This syndrome is characterized by an overactive sympathetic nervous system, superficial pain exceeding the expected, and hyperesthesia of the involved part. Almost universally, this symptom complex has been described only when appearing in an extremity. However, as the result of our recent investigations we have widened our diagnosis and therapy to include other areas of the body where similar causalgic (burning) pain may appear. As a result, our present concept is that this type of pain in certain patients may develop wherever any somatic nerve group is accompanied by sympathetic nerve fibers.

Weir Mitchell in 1872 introduced the term "causalgia" to describe the outstanding symptom, burning pain. His original definition was "hyperesthesia of the hand or foot following an injury in the region of a peripheral nerve." The term "causalgia" has since been applied to many variations of the syndrome originally reported. Clinicians in different specialty groups disagree as to exactly what the entity "causalgia" is, and use various names for it according to the focus of attention on different manifestations. Best known among these names are acute atrophy of bone, Sudeck's atrophy, traumatic vasospasm, traumatic angiospasm, reflex nervous dystrophy, post-traumatic osteoporosis, minor causalgia, neurovasospastic phenomenon, and chronic traumatic edema.

Etiology

Many theories have been proposed as to the cause of causalgia; accessory nerve fibers, reflex arc, infection, reflex vasospasm, sympathetic nerves functioning as an efferent pain pathway, fibrosis about the nerve, shunting of the impulses from the sympathetic to the sensory fibers of the injured nerve, and efferent impulses from the hypothalamus traveling to the sympathetics following emotional and environmental stimuli. Not one of these theories is completely satisfactory, since they have not been proved and, in addition, since causalgia does not occur in every case.

Certain writers hold that different noxia are responsible for the production of the syndrome in the presence of an endogenous abnormal reactive predisposition of the sympathetic nervous system. In reviewing the histories of these patients, one cannot help believing that the 5 per cent or less reported in the literature of having this condition following nerve injuries must have a different anatomic and physiologic makeup from that of the other 95 per cent of the population. It appears that most of these patients tend toward periods when their sympathetic nervous systems are hyperactive, either obviously — on an emotional basis — or by clinical signs, and are therefore prone to develop causalgia following trauma. In our clinic, we term this type of individual a "sympathetic reactor."

Frequently, a psychogenic etiology is suggested, and many patients have been unjustly considered to be malingerers or hysterics. No constitutional psychogenic factor can be found, but sudden noises or emotional stimuli such as fear or anger do influence the pain, especially in extreme cases and in the direct nerve injury group.

Symptoms

The outstanding feature of the disorder is *burning superficial pain.* The superficial character is especially emphasized to differentiate it from deep pain such as that caused by ischemic neuritis, traumatic neuritis, abscess, neuromas, bone injury, et cetera. The pain may be described as burning, throbing, aching, vise-like, and so forth; frequently it is difficult to obtain the classical description from the patient.

Pain may occur instantaneously, or may be delayed for weeks. Referral is distal, and chiefly occupies the palm of the hand, the fingers, toes, or plantar surface of the foot in the extremity complaints. However, recent investigation has shown, as stated previously, that other areas of the body such as neck, face and trunk may have similar complaints.

Hyperesthesia is the second most prominent complaint. This may be localized to a sensory nerve, but is frequently incomplete. Slight stimuli, such as drafts, bed sheets, clothes, or examiners' hands, will induce extreme paroxysms of pain. To protect the injured part from such stimuli, patients go to extremes, sometimes holding the extremity in one position or covering it with dry or moist cloths. The cool or warm moist cloth, surprisingly, provides relief in a significant number of patients.

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*Presented before the 9th Annual Postgraduate Medical and Surgical Convention, Pioneers Memorial Hospital, Brawley, Calif.

Increased sweating of the involved foot or hand may be very marked, and a past history regarding this tendency is frequently elicited.

Vasomotor changes vary widely. In general, these may be divided into those of vasoconstriction and those of vasodilatation. Such signs may be misleading: Initial warm rubor may develop into the pale, cool, wet foot manifesting vasoconstriction — a classical picture. Arteriosclerotics most frequently show the shiny, scaling, dry foot.

Other signs may include swelling, stiffness of the joints (from disuse), and roentgenologic evidence of spotty osteoporosis.

In general, diagnosis is based on (1) history of overactive sympathetic nervous system; (2) superficial pain exceeding the expected; and (3) hyperesthesia localized to a sensory nerve.

Treatment

Treatment demands prompt diagnosis and early institution of specific therapy. Delay results in fixed patterns of pain, with dysfunction and atrophy of the part. Poorest results from therapy are in those patients with the longest delay of diagnosis and treatment, i.e., years.

Initially, the nature of the disease, its physiologic basis, and the possibility of relief from therapy are explained to the patient, in an attempt to obtain his co-operation.

One of the sympatholytic drugs, preferably Priscoline 10-20 mg., or Hydergine .3 mg., is given intra-arterially to the involved extremity or intravenously when some other area of the body has the presenting complaint. Prior to this injection, the patient is informed that his present pain is to be classified as 100 per cent, and after five minutes we will again ask him what percentage of the original pain remains subjectively. This is also evaluated objectively by stroking or handling the area involved. If significant relief is obtained by either of these two methods, utilized for establishing a diagnosis and therapy, then an oral sympatholytic drug is administered, such as Priscoline 50 mg. three times a day, Hydergine 0.5 to 1 mg. sublingually four to six times a day, Ilidor 25 to 100 mg. three times a day, or Arlidan 6 to 12 mg. three times a day. The prescribed drug is adjusted to patient response.

The fourth step has been procaine sympathetic block, with infiltration of the stellate ganglion for the upper extremity or lumbar sympathetic chain for the lower extremity. Absence of sweating following the block is routinely checked either by gross evaluation, ophthalmoscope, or a skin resistor apparatus. This is for proof of an effective block.

In any patient in whom pain disappeared for four hours or more, repeated use of the therapy utilized was justified at later dates.

Surgical ganglionectomy is the last resort. For the lower exremities, it may be necessary to go as high as T-11, as in the procaine sympathetic blocks. An occasional patient who has had a sympathectomy may develop a similar type of pain proximally on the thigh or hip about 10 days postoperatively. This pain is relieved by a higher sympathetic block.

In some patients, additional physiotherapy is necessary to complete their treatment.

Replacement of an injured vessel, embolectomy, or thrombectomy may be necessary. Periarterial sympathectomy has been abandoned in our clinic, although published reports suggest it may be of benefit in an occasional patient.

We have previously tried sectioning of posterior roots and intraspinal injection of alcohol without success; we consider this method obsolete.

Other methods recently reported as successful have been artificial hibernation, chlorpromazine, hexamethonium, and dibenzyline. We have not had experience with any of these methods of treatment.

Rehabilitation, including physiotherapy, is necessary to combat the patients' fear that pain will return. Atrophy from disuse may develop in patients in compensation cases as part of the mechanism to postpone going back to work. Marked osteoporosis (Sudeck's atrophy) is a good indication for physiotherapy. Complete relief for those in this group may be delayed for months.

Patients who are not relieved by adequate sympathetic denervation should not be classified as causalgia, but should be studied more carefully.

In some surgical procedures undertaken to increase the circulation to an extremity, results can be judged good on the basis of loss of causalgic-type pain. In sympathectomies for arteriosclerosis obliterans, undertaken to increase the arterial flow, we are frequently unable to detect an increase in vascular supply, yet the patient's foot is more comfortable. Similarly, an arterial graft may have thrombosed, yet the patient is subjectively improved. Arterectomy and periarterial sympathectomy alone have been known to give relief. A clearer understanding of the nature of causalgia in all its variations and a closer scrutiny of such patients will help to clarify indications for therapy and to improve our diagnostic acumen.

Our results have been most gratifying, probably because of the limited selection of patients for therapy. Every patient has undergone the diagnosic test of intra-arterial or intravenous sympatholytic drug, or a procaine sympathetic block. Two types of pain may be present in the area, one of the causalgic nature, the other a somatic type. In this instance, results of the removal of one type of pain, namely the causalgic type, should be closely evaluated, following which treatment of the other type of pain should be instituted by some other method as indicated.

Summary and Conclusions

Diagnosis is based on the history of an overactive sympathetic nervous system, superficial pain exceeding the expected, hyperesthesia to the involved part, and permanent or temporary relief following the use of intra-arterial or intravenous sympatholytic drugs, or procaine sympathetic block.

Specific treatment consists of intra-arterial, intravenous, and/or oral sympatholytic drugs, paravertebral sympathetic blocks, or sympathectomy, plus physiotherapy.

It is our belief that causalgic pain is a common entity occurring not only frequently in extremities, but also in other areas of the body, and should be considered when pain is classified as being superficial, and a positive test from a sympatholytic drug establishes the proper diagnosis and therapy as mentioned.

Recognition of the syndrome is necessary, since these patients are miserable and fixed organic changes may take place over a period of time. Such people are frequently misunderstood and discredited because the source of the symptoms is not realized.

RADIOACTIVE FALLOUT*

By Lt. Col. S. E. Lifton, M.D.

WE'VE COME a long way since March 1, 1954 at which time radioactive fallout hit us for the first time. When we first started to work with atomic weapons we knew, of course, that a tremendous amount of ionizing radiation would be emitted at the time of detonation. However, we felt that this was somewhat academic in that personnel who would be in a position to receive appreciable doses of ionizing radiation would be well within the lethal zone of blast and thermal damage. This was due to the fact that air bursts were utilized, resulting in no radioactive fallout. Consequently, the radiation problem was de-emphasized until March 1, 1954, at which time, as you all know, we had a multimegaton blast take place on the island of Bikini. There were three islands involved in this incident, two of which contained natives. One was Ailingnae, approximately 75 miles downwind; another was Rongelap, approximately 100 miles downwind; and a third was Rongerik, approximately 150 miles downwind. There were 65 natives residing on Rongelap, 17 of whom were on Ailingnae on a fishing party. Twenty-eight American servicemen, part of a weather detachment, were stationed on Rongerik.

About six hours following the detonation, the natives on Rongelap noticed what appeared to be small particles of ashes or snow falling on their island. They didn't realize the potential importance of this at the time. Shortly thereafter, the military personnel stationed on Rongerik noticed what appeared to be a mist falling on their island.

Their radiac instruments told them that this was fallout. They went indoors and stayed there. Furthermore, they washed those portions of their bodies which had been exposed to this fallout and therefore they received very little body surface contamination.

The natives at Rongelap — and I'll speak mostly about these personnel because they were most heavily exposed — received approximately 175 *r* whole body gamma radiation. The natives on Ailingnae received about 70 *r*. The first symptom noted by the Rongelap natives was an itching of the skin. It is difficult to ascertain wether this was due to ionizing radiation (there is some controversy as to whether ionizing radiation per se produces itching) or whether this was due to the chemical or mechanical irritation of the skin from the fallout particles themselves. About two-thirds of all personnel on Rongelap became nauseated within the first 24 hours, and about three or four of these also vomited. It was difficult to ascertain whether the vomiting was actually due to the radiation received or whether it was due to good old-fashioned seasickness, since these personnel were aboard destroyers exacuating them from their island.

The military personnel, when their radiac instruments went off scale, became somewhat perturbed and they sent a message to the commander of the joint task force, informing him of the situation. The latter, immediately realizing the importance of this, sent surface vessels and aircraft to evacuate not only the military personnel, but all the natives on the islands.

Before the shot, it was predicted that the fallout would miss these islands completely. In one sense we are fortunate, despite the fact fact that the natives and American personnel received fallout. The natives who all resided at the southern end of the island received 175 *r*; however, if they had been living at the northern end of the island which was laterally displaced toward the center of the fallout path, they could have received about 2,000 *r*. From this it can readily be seen that lateral displacement in a fallout path is very important.

Results

As soon as the natives arrived at Kwajalein they were examined. Subjectively, they exhibited no symptoms at this time. Objectively, the laboratory findings were those of lymphopenia, as expected. Platelet counts were down, and it is now felt that a platelet count is one of the best laboratory indications of exposure. For about two weeks these personnel were asymptomatic; then, gradually they began to develop epilation and, also, some skin lesions due to beta burns. The epilation which occurred had disappeared within six months in all personnel, and the hair pattern had returned to normal. The progression of beta burns went from hyperpigmentation to dry desquamation in superficial lesions and wet desquamation with deep involvement. Following this, there was depigmentation, healing, and repigmentation.

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*Presented before the Sixth Annual Cancer Seminar, Tucson, January 1958.

You will recall that the natives took no protective measures against the fallout, and most of them had not bathed prior to boarding the destroyers. All the natives were washed, however, after boarding. The most deeply involved lesions were found in the axilla, antecubital fossas, and in other places where there is moisture and where dirt and matter of any kind tend to collect and stick.

Following this detonation of March 1, 1954, both the military and civil defense realized the import of what had happened. From a military offensive viewpoint, we could expect a considerable bonus effect (fallout) from large yield weapons detonated on the surface of the earth. From a defensive standpoint, both military and civilian personnel could be in an area completely untouched by the primary effects of the bomb, blast and thermal, and still we could become casualties even hundreds of miles away as a result of this bonus effect. If we are unprepared to cope with this fallout, we may become needless casualties, and those of us who are physicians may, therefore, be in no position to offer our help when we will be most needed.

Before going any further, perhaps I should explain why one denotation results in radioactive fallout whereas another does not. This depends primarily upon the type of burst which we have. An air burst is one in which the fire ball does not dissect the surface of the earth. When a weapon is detonated in this manner, the fire ball rises and because no dirt and debris from the ground are sucked up with the fire ball, there are no heavy particles to which the fission products can adhere. These fission products rise and travel several times around the world before they fall out. By the time these fission products do fall out, radioactive decay has occurred to a great extent, especially in those fission products which have short half lives. In addition, a tremendous amount of dilution has taken place so that we have as such, no fallout problem.

On the other hand, when we have a surface detonation, the fire ball dissects the surface of the earth; thousands of tons of dirt and debris rise with the fireball, mix with the fission products and, because the resultant particles are heavy, these particles fall out fairly rapidly.

Protection and Dosage

The methods of protecting against fallout are compartively simple. An ordinary frame house will offer approximately 50 per cent protection to personnel who are inside as compared to the dosages which would be received by individuals on the outside. Simple trenches, six feet deep, will give a residual number of 0.1, which means that personnel in these trenches will receive 90 per cent protection. A basement, especially if it has no windows, will offer protection up to 1/1,000th of what would be received on the outside. Three feet of earth interposed between the radiation and the individual will essentially offer complete protection.

The natives did have some internal deposition of radioactive fission products due to inhalation and ingestion, but the radiation dosage received from this internal deposition was exceedingly small compared to the external dose. This is a finding which we could have predicted since all of our studies at the Air Force Special Weapons Center and at other research centers have indicated that in every case involving exposure to nuclear weapons, the internal dose from ionizing radiation is always insignificant compared to the external dose.

Before I close, I would like to leave one last thought with you, and that is the concept of therapy for casualties following a nuclear detonation. We as doctors have all been taught and we have all practiced the type of medicine so that when we receive a number of patients in our hospitals, we always take care of the most seriously injured first. This concept during nuclear warfare, whether we like it or not, is going to have to change, if we are to save the maximum number of lives. Medical personnel

– and when I say medical personnel I include dentists, nurses, and all ancillary personnel – are going to be pressed into service. Regardless of whether we are psychiatrists, pediatricians, or members of some other specialty we are all going to be doing some form of surgery, whether it be first aid or something more sophisticated. Doctors and medical supplies will be limited. Therefore, we cannot waste our talents, our time, nor our medical supplies on personnel who have a small chance of survival even despite the best treatment in the world. This I realize is contrary to our principles as doctors and, yet, because of all these shortages, if we expend all the time and material necessary to give one severly injured patient some small chance of survival, we will certainly condemn hundreds of others less severely injured whose lives could be saved by simple non-time-consuming procedures. Therefore, your supplies, your talents, and your time must be reserved for those who have a good chance for survival.

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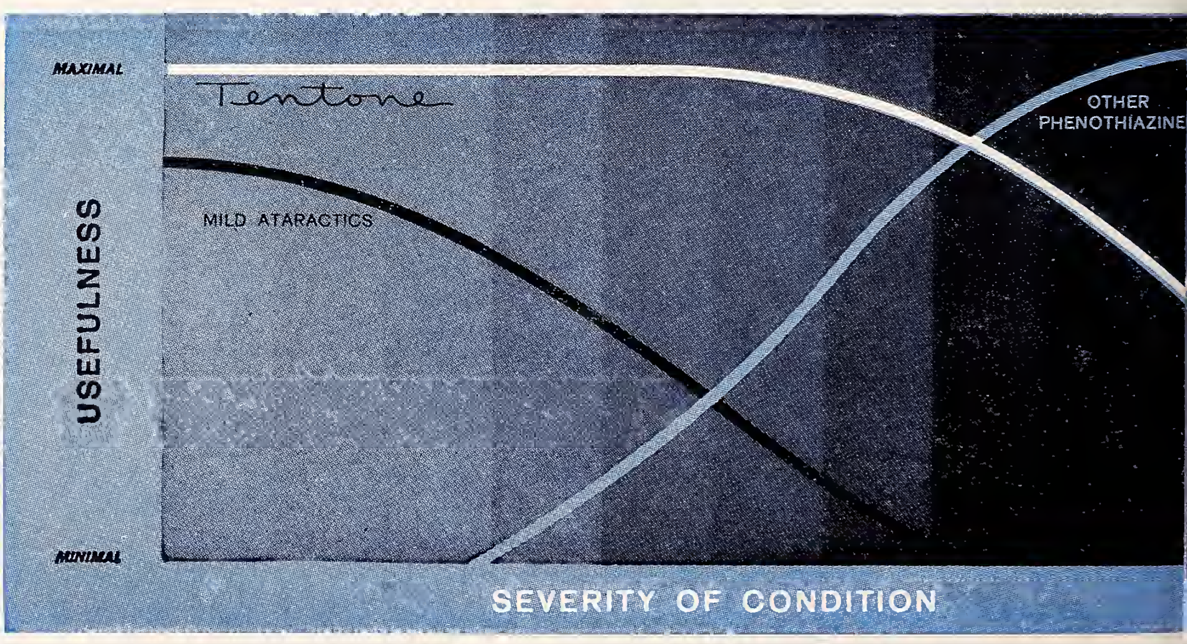

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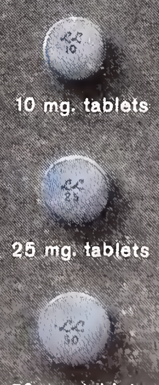

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Journal of
The ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 16 AUGUST, 1959 NO. 8

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Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
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The Editor is always ready, willing, and happy to help in any way possible.

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THE LOGICAL THING TO DO

DOCTORS are men of science. As such, they are trained to inquire into causes, to separate fact from fiction and, having obtained the facts, to proceed to a logical conclusion. This is what they are taught in school. It forms a cornerstone of most medical practices. Unfortunately, the cornerstone is not bearing its full share of the weight.

Logic, as the handmaiden of medicine, should tell doctors she is ready to assist beyond the circumscribed field of the treatment of disease. She can help in the broader aspect of that intangible but precious commodity, a mutually beneficial doctor-patient relationship. How? Let logic herself tell you.

Aside from his illness, a patient's chief concern often is its eventual cost to him in dollars. Aside from his patient's illness, which is the doctor's chief concern, there must lurk somewhere in the back of his mind, consciously or not, the question of being paid for his services. He would be neither human nor quite bright if he didn't.

We have now established a fact — that of two minds entertaining the same thought — the thoughts of buyer and seller, to be blunt about it. Thus it is logic itself for the seller (the doctor) to explain to the buyer (the patient) just what the cost will be, and it is just as logical for the patient to arrange with the doctor for a system of payments which will prove a burden to neither of them. If hospitalization is required, logic directs the doctor to go a step or two further and explain to the patient not only about the charges made for the various hospital services, plus the anesthesiologist's bill, but his own charges for hospital calls as well.

It is logical for a patient to feel irritation when he finds he is asked to pay for such visits, particularly when, in the patient's view, the doctor has performed no service to merit a fee. Here logic dictates that an explanation by the doctor of his duties in behalf of his patient in the hospital be explained beforehand. Tell him about the orders that must be written with meticulous care, the consultations with the radiologist or other specialty staff member, and so on. It will be a revelation to the patient, and a blow struck by the doctor for the preservation of free enterprise in the practice of medicine. The patient who feels he is being overcharged is the patient who will listen to the siren song of socialized medicine. But each doctor, in his own office, and in his own way, can silence that song with a frank discussion of costs. It's the logical thing to do, and it takes only a little time.

J.D.V.

PROBLEM OF EDUCATION*

THERE are about twice as many applicants as there are places in U.S. medical schools each year. Some of the less qualified students are accepted while in some instances a considerable number of the nation's better minds are excluded.

This is due largely to the prevalence of geographic limitation in the selection of matriculants at many publicly-owned medical schools.

As a result of this geographical discrimination, the attrition of students due to poor scholarship has been significantly higher in the publicly-owned schools where this discrimination exists, than in those privately owned. And the public schools have had only one-fourth to one-fifth the number of applicants to choose from as have the privately-owned institutions.

A study also shows there is evidence that the Medical College Admissions Test scores are lower on the average for entering students in the publicly-owned schools than in those privately owned.

The policy of restricting most admissions to students residing in the state where the school is located has been evident for years in many publicly-owned medical schools. Such a policy is advocated and defended by legislators as insuring educational opportunities for the children of taxpayers of the state who support those schools.

Dr. Melvin A. Casberg, vice president of the University of Texas, editorialized on this subject in the April issue of *The Journal of Medical Education.*

"In the face of a chronic cold war in which the quality of our manpower is at a premium we can ill afford the petty luxury of the wastage of human resources," Dr. Casberg wrote. "While few will disagree with the valid assumption that the primary responsibility of a state institution lies in the education of its resident population, it is necessary for citizens of the state to appreciate the benefits of the healthy leavening of ideas and talents that accrue from the admission of well qualified non-resident students."

Dr. Casberg also pointed out that annually over the past decade one half of the total of approximately 600 licenses approved by the Texas State Board of Medical Examiners have been issued to phyiscians educated outside Texas.

Texas' two publicly-owned medical schools, which are a part of the University of Texas system, have a combined graduating class of some 230 students. They have been admitting only residents of the state to their freshman classes. On the other hand, Baylor University College of Medicine, a private school, has a graduating class of about 80 students, and admits one half of its freshman class from without the state.

Every year, Dr. Casberg wrote, some 50 residents of Texas enter the freshman classes of medical schools elsewhere. Thus, over the recent years a total of some 320 residents of Texas have been graduating annually from all schools of medicine. However, this combined graduating class is only half of the number of physicians annually taking up practice in Texas.

"These statistics merely serve to emphasize how much a debtor a state may become to the medical schools of the rest of the nation," he wrote. "Let us not forget that the medical school applicant is a national resource and as such should not be sacrificed on the provincial altars of geographical discrimination."

Much more serious than the matter of simple provincialism is the fact that this geographical limitation may mean that some highly qualified students — rejected solely because of state residence — have been lost to medicine.

Parochialism to this degree works to the disadvantage of both the capable individuals and to the broader interests and welfare of society itself.

It is hoped that state legislators and other public officials concerned with these matters will co-operate with medical school administrators in bringing the policies restricting admissions into a more realistic and socially useful focus.

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*AMA News ● June 1, 1959

EDITOR'S NOTES

Surgical Forum (1959) cont.
Graduate Surgeons of Los Angeles

7. VASCULAR LESIONS OF THE SKIN AND THEIR IMPORTANCE IN SURGERY AND MEDICINE

By Dr. William B. Bean

OUR PROBLEM is that we see what we look for and not what we look at. "Skin spiders" are noted not only in cirrhosis but also at the time of pregnancy. They disappear or diminish following the termination of pregnancy. This is a time when estrogens are high in the female and it is noted that they are rather high in the cirrhotic. Ten to twenty per cent of normal people have one or more spiders near the eye. It is an arterial overgrowth. These vascular skin spiders are noted in 75 per cent of Laennec's cirrhosis. This increases to 78 per cent if the liver is enlarged. It is present in 33 per cent with acute hepatitis. In 12 per cent of the patients with obstruction of the common duct due to a stone, but has not been noted in any cases with obstruction of the common duct due to cancer at the head of the pancreas. They tend to cluster in the upper part of the body and somewhat the exposed areas of the body.

Palmar erythema is noted in some cases of liver disease. This is a mottling that can develop with pregnancy also. Both the spider nevi and the palmar erythema are noted with an increasing frequency in the later months of pregnancy.

Osler's disease, or familial hemolytic telangiectasia, is a dynamic state. It can be confused with vascular spiders. They look very much like blood blisters, or dilated vascular spaces. They are inherited as a Mendelian dominant. They may cause hemorrhage into any organ or viscus. If bleeding from the gastro-intestinal tract occurs in these patients it is almost a hopeless situation.

The blue rubber bleb nevi occur widely. These patients frequently have lesions in the gastro-intestinal tract which may bleed or perforate, but they are rather localized lesions and are resectable.

Universal telangiectasia do not operate upon these patients. It is a generalized problem.

Caviar tongue is a lesion noted on the under surface of the tongue with increasing frequency with advanced age.

The superficial skin varicosity is frequently seen in the lumbar area of the back.

The cherry (senile) angioma occurs fairly evenly over the trunk.

The zone of Corona is related to aging and is an inconsequential finding.

Janeway's lesions are noted in bacterial endocarditis are due to septic emboli and disappear in one to two weeks.

Patients with large congenital venous cavernous sinuses may throw emboli.

Venous lakes which are noted on the ears, face, lips can be evacuated by pressure. They occasionally bleed out but they are inconsequential.

Fordyce's lesions are dilated lakes which follow the veins of the scrotum and may be a source of considerable and serious bleeding.

8. BASIC PROBLEMS IN THE TREATMENT OF CANCER

By Dr. George Crile, Jr.

He feels that we have failed in our extending the operations of cancer. While the cure rate has risen, the death rate for the common types of cancer has not been changed in many years. This is a paradox.

He believes in biological predeterminism. It is his confirmed opinion that there are three basic types of cancer. One, lesions that remain localized for a long period. Two, lesions that metastasize locally and it is in these cases where irradiation and extensive surgery is valuable. Three, lesions that metastasize distally at a very early date. He believes that in breast cancer you are dealing with a cancer that in some cases will tend to metastasize locally, and in other cases you will early get distal metastasis.

"Why don't all people with circulating cancer cells get metastasis?" Factors governing metastatis are many. Massage, and this is vigorous massage, can cause a spread of the cancer cells, but this is not true for all tumors. The lymphnodes are a filter and an efficient filter, but the lymphnodes do not seem to be the deciding factor in the metastasis. People who die from cancer of the breast or colon do not die from lymphnode metastasis, it is the blood stream metastasis that kills them. However, in cancer of the head and neck, the lymphnode metastasis are of utmost importance. The factor of trauma is important. Cancer cells will tend to localize at a site of trauma. This is noted particularly in the Krunkenberg tumor of the stomach which localizes in the still active ovary.

He believes that there is no lag period in the healing of wounds, that chemical changes are going on immediately after the injury takes place.

We are in complete ignorance as to what determines the localization and growth of cells. 19 years ago Ferguson in reviewing the Tumor Registry lesions diagnosed as osteogenic sarcoma an increase in the survival rate 3 per cent to 30 per cent, if surgery was delayed more than six months from the time the tumor was noted. This led him to speculate on "the tumor-host relationship".

He believes that tumor cells are always circulating and they only implant if the tumor-host relationship is altered, as in this case, with an amputation.

Dr. Ed Fisher in Pittsburgh by injecting 250 malignant cells in the portal vein and checking animals over a 2 to 3 weeks period finds the cells localize and establish a metastatic tumor in 20 to 23 per cent of the cases. This is increased to 80 per cent if the liver is massaged.

He quoted Dr. Warren Cole's work stating that the metastasis would be cut down to ¼ in animals where he attempted to implant tumors if he merely changed the diet of the animals.

In reviewing Kaplan's work on transplantable tumors in animals, if the tumor is irradiated in situ, he increased the metastatic rate from 9 per cent to 40 per cent. As far as Crile is concerned, the irradiation precipitated an alteration in the host-tumor relationship.

At the Cleveland Clinic they have developed soft tumors in animals then massage these tumors vigorously removing them in the roughest manner possible, in fact, cutting over, curetting out and then squeezing out the tissue. Other animals they have a thigh amputation. In the latter cases, they have had the greater number of metastases.

In a consideration of homografts in animals of skin, the first graft will be rejected at about ten to twelve days. If a second graft is applied from the donor to the host, a "second set reaction" occurs and the graft is lost in about six days. Now if a third animal is brought into play, and a lymphnode from the leg where the graft was applied on the recipient or host is transferred to the third animal and then a graft is taken from the donor animal and applied to the No. 3 test animal, the graft will be rejected in a "second set reaction" or in six days. An immune response was established by the specific lymphnodes from the limb draining the site of the recipient leg. If lymphnodes from the other leg are used, this finding of a "second set reaction" is not attained.

He feels that there are definite immunological differences in the organ with cancer as compared to the immunological factors of the host itself. Possibly the release of an excessive amount of Cortisone during a period of stress as with surgery, may remove some of these immune responses or alter the immunity of the host. He brings up the question, does the removal of an organ remove some of the immunity from that host?

He further questions, should one do a small operation to excise the primary lesion, wait a few days, then remove the regional lymphnodes. In this manner permitting the immunological reaction of these lymphnodes to be effective against any circulating cells.

Dr. Dennis states that they had noted somewhat better results in staging their "Commando operations". That is, if they would do their complete necks in stages rather than at one time. This would somewhat bear out Dr. Crile's suppositions.

9. *CHRONIC ULCERATIVE COLITIS*

By Dr. Clarence Dennis

This is particularly a disease where one should listen to the patient and learn what he knows about his particular disease. To define this disease, it is extremely difficult and a precise statement cannot be made. In animals if one takes away the sympathetic innervation, diarrhea will develop. If this is followed by a vagotomy, diarrhea can be prevented. This does bring up a question but proves nothing in relation to CUC. There seems to be a psychiatric factor present and yet there is very little psychiatric help to be attained. Vitamins may be of help. A sensitivity to foreign protein is a definite possibility and certainly 50 per cent of the patients are improved on a milk free diet. Some of the patients start their disease following bacillary dysentery, some others following amoebic dysentery, some following typhoid or after tuberculosis of the bowel. One patient developed the disease following a colonic irrigation. It seems rather definite there is an initial severe trauma followed by diarrhea with a rapid transit of foodstuff through the GI tract which may bring the food down into the lower bowel in an undigested state when it can be quite an allergic factor.

Rabbits can be and have been sensitized to egg albumen by injection. If the egg albumen is then given in a normal saline enema the animal can be killed.

Treatment seems to consist of rest, probably altering the diet, and adding vitamins to the diet. The rest should not be bedrest. Cortisone may be helpful. Hydrocortisone as a gentle enema has been helpful in a number of cases. Banthene is definitely useful. Psychotherapy must be considered, but there is very definite question as to which comes first, the diarrhea or the psychiatric problem.

In a review of 102 patients not treated with surgery, but by medical management, 15 were living more than 5 years, 37 were dead and 50 had been lost to followup. Of 159 patients going to surgery, considerably better results were noted. He believes that surgery should be considered earlier in the disease.

The cause of death, about 10 per cent of these people will develop cancer of the colon. He had no cases of cancer developing in less than ten years after the onset of this disease. Fibrosis in many of these cases is very great. It will distort the X-ray and actually in followup films may hide a malignancy. Therefore, he would encourage removal of the colon. In 270 cases of chronic ulcerative colitis that he has followed, 21 developed cancer. None of them under the ten year mark. Usually the cancer developed after having the colitis for more than 16 years and at an average of 35 years. He finds that 4 per cent will develop cancer per year after having CUC for ten years. Something more than 1 per cent will develop cancer of the rectum if it is left, for each year after the tenth year.

In a number of these cases he has performed a vagotomy by the transthoracic route. He has 30 patients in his series, 10 of them are living and well. Four are ill. One died of liver failure. 15 of them needed further surgery. He had a 7 per cent overall mortality. Ten of his patients had the vagotomy after having other surgery and for extension of the disease into the small bowel.

Mortality from ileostomy varies greatly whether is it combined with a colectomy or not. The ileostomy alone resulted in a 10 per cent mortality. This became less than 5 per cent if it was accompanied by a colectomy at the same time.

About 10 liters of fluid passes the ligament of Treitz each day. In the midileal area there is approximately 12 liters of fluid passing any one point. This is cut down to about 480 cc. of fluid passing through the ileocecal junction. Therefore, it is quite desirable to retain as much of the ileum as possible, and this means particularly the terminal 18 inches. However, disease of the terminal ileum may force you to go more proximally, but one should retain as much ileum as possible. At times it is necessary to do a frozen section to determine the level of involvement.

If an ileostomy is done, he is inclined to do it as close to the midline as possible and on the level with the beltline. In those cases where he has brought it out through the wound, in 33 per cent they had a wound dehiscense. In all cases he feels that the mesentery should be anchored to prevent an internal hernia, if necessary bringing down a flap of peritoneum from under the right lobe of the liver. In performing his ileostomy he everts it upon itself, folding it back, taking the full thickness of bowel and suturing the everted edge to the edge of the skin, to the outer edge of the ileostomy as it is coming out through the abdominal wall. Further, he sutures the ileum to the posterior rectus sheath and peritoneum and always brings out a bit of extra ileum because of the weight the patient gains in the post-operative period.

Surgical mangement is helpful, but it is safer to remove the colon. He has noticed that cirrhosis is two times frequent in these patients as in the general population.

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LETTERS TO THE EDITOR

The Editor
Arizona Medicine
Phoenix, Arizona

Dear Sir:

ENCLOSED is a photostatic copy of a letter which my father wrote to his grandparents in 1916. My father, W. W. Horst, M. D., practiced in Globe from 1916 till 1929. He was at one time City Health Officer.

These letters make for some extremely interesting reading, and I thought perhaps your membership might be interested in having these letters printed in whole or in part in your journal. My father died in August of 1957, and these letters have recently come to light.

After he left Globe he practiced in Wilmington, California for the period from 1929 to 1957.

Incidentally if anyone can figure out approximately where he went on this trip I would be interested in knowing. I have looked at a map but I am unable to determine the area where he went.

Yours truly,
J. R. Horst, M.D.
8727¾ La Tijera Blvd.
Los Angeles 45, Calif.

Globe, Arizona, May 8, 1916.

100 miles by horseback and 60 miles in an auto to set a broken leg.

Dear Grandma & Grandpa,

I begin this letter with the above heading for that is just what I have done. Thursday morning we received a call for a doctor to go to one of the ranches to take care of a broken leg. I left here at 10 am in my auto and went over the Roosevelt highway 30 miles; along the way I had considerable trouble with my engine besides breaking a couple of ball berrings and getting the wheel loose on the axle, how I did wish that Grandpa was along to fix it for me. This is a very crooked road with many steep grades and sharp curves and goes through a semidesert district. This took me to the Roosevelt lake where a cowboy met me with a saddled horse for each of us. A lady who was living there gave us to eat all that she happened to have, which was cake and coffee; this suited me, our dining room was her parlor, kitchen, bedroom etc, an old hen was seated comfortably on the bed, and the floor was the one made by nature, i.e. plain ground.

After this we strapped my grips, splints, plaster paris outfits to the saddles and my guide gave me his "chaps", they smiled when I called them leather breeches, I was now rigged out like a regular cowboy and my own mother would not have recognized me. We then went across the lake on a ferry and began our ride at 2 pm. The way was over hills and mountains, down one hill into a canyon, along this then up another hill or mountain, whenever we reached a level spot we would trot or gallop along. Oh how fine it was to gallop or lope as they call it, you straighten up, get the kinks out of your back, throw out your chest, lean a little forward, holding both arms up, one empty and the other having the reins, and as you go forward you feel like a king. The sides of some of these places were very steep, and I was glad that the horse was sure footed, for a roll down some of these places would have meant a job for the undertaker; by & by we came to what looked like it might have been a wagon road some years ago, as I mentioned this to my guide he said, yes this IS a wagon road, I certainly hope that I will never have to ride in a wagon over such a rough road. Finally we stopped, my guide made an awful noise and informed me that he was calling for a man who was to meet us here. There was no reply except the call of quail, of which there were very many. Then we went down a very very steep hill when I felt that my horse would surely fall, but he did not and then after looking around a while the guide said that he found the other man's tracks going up the canyon, we followed them and soon found him, he gave us an extra horse to deliver at a ranch above. We then went along through this semidesert country with its many varieties of cacti, some at least 20 feet high, as well as the small prickly pear variety which you remember grew around Woodward. There was the yellow blossom as well as the cacti with red flower, daisies galore, small red and white flowers, the blue bells, the Arizona state flower, the Larkspur, and a thousand others. About 4 o'clock the trotting commenced to make my insides feel like I needed my appendix and several other things taken out, so that I loped whenever I got a chance and tried to keep up with my guide, who when I asked how we were getting along replied "rather slow." About this time we hit a very small stream, just about deep enough to wet your feet, this was called "Chalk Creek" and we quenched our thirst here, even if it was warm and full of moss, for my thirst was terrific and I never seemed to get enough water on this trip. Later we passed a ranch along a little stream, where things were nice and green and a few minutes later passed a lady who was riding home with a bunch of radishes from this place. I am getting tired as you see by the mistakes, so I will go to bed and continue tomorrow.

May 10, 1916.

Was too busy to write yesterday, and at present am tired from a big operation which I did on a TB hip.

Well to continue my trip, about 5 o'clock we came to a camp and had good beef stew, beans, hash, apricots and some bread about like cold biscuits. Here I got a new guide Mr. Marley to whose ranch I was to go. We then went about 4 miles to reach the Flying H ranch, on the way we killed a rattle snake and I saved the rattlers for a souvenior. This made a trip of 25 miles on horseback in about 3½ hours, and this was the first time that I had been in a saddle for over 15 years. The time was considered good for one used to riding, let alone for a tenderfoot. You can imagine how tired I was, and again how my heart sank when I found that the patient was not at this place as supposed to be but was taken to the Flying V ranch 25 or 30 miles further up in the real mountains. I wanted to spend the night here and go further in the morning, but I found that the cowboys were intent on going right through.

After some more supper, I was given a fresh horse, one of the most gentle and sure footed they had. Then with one man in front and another behind me I had no chance to get away, and I was too valuable a man to lose at this stage of the game! We were between two ridges of mountains, each 2 or 3 times at least as high as the big 21 story Famous Barr building at St. Louis. Thus started up the side of the one on the right side, resting our horses every once in a while. Whenever we hit a small stretch of level land we would "lope." Oh how beautiful it was just at sunset. I had been told that a fresh mount would rest me and was surprised how much better I felt. Here we were going along in single file in "The Land Where Nobody Lives and The Dogs Bark at Strangers" like the three wise men. When we came to the steep places we would zigzag up because it was too steep to even think of going straight up, and again I was glad that my horse was sure footed. When we reached the top of the mountain we looked back and saw the smoke from the Miami & Globe smelters some 50 miles away. Then down the steep sides we went. I was afraid that the horse would stumble or slip and roll down the mountain side, but we reached the bottom of the canyon ok, took a drink from the cool, clear mountain stream. Now we depended on the light of the new moon to help us find the way, and it came in handy for now we were in the timber region and we had to dodge bushes, trees, and limbs. At 9 o'clock the moon left us but for another hour we had the evening star. I never knew how much light a star could give, the sky was perfectly clear, the stars shown like diamonds and we went along, sometimes quiet, again humming or whistling a tune or swapping jokes.

About 10 o'clock the evening star left us and we missed it, for although the other stars gave us some light it was hard to see, dodging the limbs was quite a task. All of a sudden I run upon a large branch which only cleared the horn of the saddle a half foot and would certainly have hit me amidships and injured me if I had not suddenly done the circus rider's stunt and leaned way to the side and thus escaped. But finally I got a couple of bumps on my head and at last one that broke the nose piece on my glasses. Hereafter I could not see well and was at a disadvantage. It was now 10:30, we passed a rock building called the Rock House, and had only 8 more miles to go, having made excellent time and at the same rate should reach our destination at midnight. There was a stream here and I lay flat down to quench my awful thirst. My mouth seemed everlastingly dry and I was getting awfully tired. Hereafter we made very poor time. Without my glasses a limb 10 feet ahead looked in the dark as if it were right upon me and I would duck time and time again when it was needless, much to the amusement of the man behind me. And oh, how the trotting did hurt me, both where the saddle hit me and in my intestines. It was too dark to gallop, which would not have been so painful to me. About midnight I was too tired to trot and my how sore I was. I then learnt the trick of leaning forward on my saddle onto the horse's neck and rested a little. My knees got weak and when I got down to get a drink of water I could hardly get back in the saddle. I thought of the poor men in the European war, who were at times twice as tired as I was. Did you ever feel so tired that you did not care very much what became of you. Well that was the way I felt. My guide pinned a white handkerchief to his back at my suggestion so that I could see him better in the dark. We would lose the trail and then find it again. When I could not see it I let my horse go and somehow he found it. The man behind me would say "To the right," "To the left," "Around that tree." The man in front would say "Here is a low tree, watch your head" and then to the side of my saddle I would go. The guide dropped back to ask if I was all in, and said that he was awfully tired having ridden 50 miles to telephone for a doctor, and was now making the return trip 100 miles in all, within 36 hours.

After going down another steep mountain we heard the pleasing sound of a dog, for now we had completed our ride. It was 1:30 a.m. 11½ hours in the saddle to make 50 miles in a stretch. Did you ever think that I would make such a trip. I certainly did not.

My patient was the new manager, who was to have charge of the ranch which had just been sold for $300,000. I found him with a break of both bones 3 inches above the ankle. I made him more comfortable for the night and went to bed.

The boy who was taken to the shed and had to wear a pillow the next day had nothing on me. The next morning I had 3 welts on me the size of a half lemon, and just as hard. It certainly pained me to sit at the breakfast table. They told me that the first time Dr. Slaughter went to this country that he had to eat his breakfast off the sadle, and that I stood the trip remarkably well for one not used to riding, and that it was considered a hard trip even for a cowboy. That day I spent putting my patient in a splint, and lounging around. I certainly was sore, you know where. That afternoon two of the neighboring girls took me to the top of a high hill to see some of the ruins left by the prehistoric people. They were very interesting and we collected a few pieces of pottery and an arrow head and many flowers. The next afternoon (Saturday) I set the fracture and put on a plaster paris cast, after which he was extremely comfortable so that I was ready to return Sunday morning. Incidentally I had a check for $200 in my pocket as payment for my services. That was not so bad for 5 days work. I can remember when I worked 4 months for a similar amount.

They made everything very pleasant for me, the very best of food & etc. As they kill about once a week I had a taste of some very tender meat. This is a good hunting country, deer, elk, bear, and they had two mounted skins of mountain lions which had been killed there the previous winter. Fortunately I did not meet any of these creatures, although I took a rifle and walked down one of the canyons but only found a few quail and missed them when I turned my attention to shoot at fence posts & etc.

I will write you next time about my return trip. At present will say that although it was a hard trip, I enjoyed it and would not have missed it for anything. For such a trip many would cross a continent. Also they think a whole lot more of one Doctor out here than they do of half a dozen preachers.

Hoping that you are feeling as well as I do, and that everything is moving along nicely, I am,

Your loving grandson.

* * *

Re: Placement Service

TO: ALL MEMBERS

Dear Doctor:

AS YOU MAY be aware, the Central Office of your Arizona Medical Association, Inc., provides a placement service wherein it attempts to locate doctors of medicine in areas where it is determined that additional medical service is desired and to assist doctors of medicine in seeking locations in this State where their services may be needed.

It is always our hope and we may rely on you and your society to advise when and where such medical services are required or desirable.

It will be most helpful and sincerely appreciated to receive any comments you may have in this regard at this time or any future date.

Thanking you in advance for your co-operation, we are,

Cordially yours,
THE ARIZONA MEDICAL ASSOCIATION, INC.
Lorel A. Stapley, M. D.
Secretary

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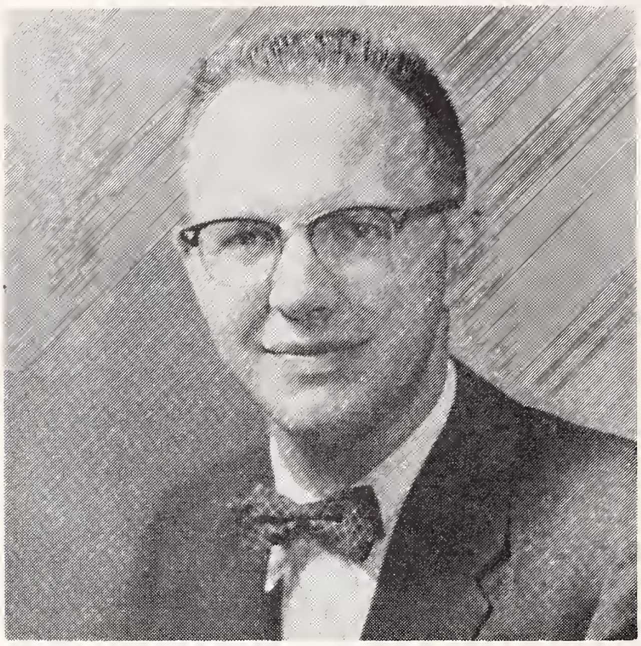
IN MEMORIUM

Donald Norman ("Bill") McLeod, M.D., 1925-1959.



Donald N. McLeod, M.D.

Born on August 28, 1925, in Tillsonburg, Ontario, Canada, the son of a general practitioner, Bill McLeod's childhood ambition was to be a doctor. He attended the University of Toronto, was a member of Nu Sigma Nu fraternity, and graduated with his coveted M.D. degree in 1948. After an internship at Toronto General Hospital, he remained to take a one year rotating residency at the same institution. In 1949 he married Elizabeth Margaret Naylor, R.N., and in 1950 they moved to Tucson, Arizona, where Bill took a medical residency at Tucson Medical Center and Pima County Hospital. In 1951 he entered General Practice in Tucson.

He was a member of Mountain View Presbyterian Church, the American Medical Association, the Medical Council of Canada, the American Academy of General Practice, the Arizona Medical Association, the Pima County Medical Society, and a member of the Active Staff of the Tucson Medical Center.

He and his wife became naturalized Citizens of the United States of America in 1955.

He died on May 5, 1959, leaving his wife, "Marg," his two children, Heather and Kirby, his father and mother, Dr. and Mrs. N. D. McLeod, and his sister, Mary Margaret, R.N.

A man who had the personal knowledge of the discouragement of chronic illness and the pain of major surgery, Bill brushed aside his own problems and plunged into the practice of medicine with a determination bred of his Scotch ancestry and nurtured at the foot of his physician-father. Into a brief eight years he packed a full lifetime of service to his patients. His ambition was to be a good doctor, and in this he more than succeeded, for the good doctor is not only the learned, but the compassionate and the courageous as well.

Those who knew Dr. McLeod as their family physician have lost a good friend. Those who knew Bill McLeod as a friend have lost a worthy companion in medicine.

Frederick J. Hirsch, M.D.

Topics of Current Medical Interest

ARIZONA POISONING CONTROL INFORMATION CENTER

AVAILABILITY OF CARBOXYLIC CATION EXCHANGE RESINS FOR TREATING HYPERPOTASSEMIA

INFLAMMATION of the kidney, particularly of the renal tubules, leading to renal impariment may accompany chemical poisonings. A dangerous elevation of serum potassium with resultant cardiotoxicity may follow severe renal insufficiency. A number of investigators(1,2,3) have suggested the use of carboxylic cation exchange resins along with other measures in the control of hyperpotassemia in renal insufficiency. One group of workers(2) has reported that they found the need for immediate hemodialysis in hyperpotassemia associated with renal impairment reduced by the use of a carboxylic cation exchange resin. The use of these resins in hyperpotassemia is based on their ability following enteral administration to remove potassium from digestive and extracellular fluids and of eliminating it from the body via the feces.

Although the carboxylic cation exchange resins are not commercially available, the following prepations are available to physicians for investigational use:

(1) S.K.F. Special Resin No. 648 (Ammonium form); available in 1 lb. bottles from Smith, Kline, and French Laboratories, Philadelphia, Pa.

(2) Carboxylic Acid Type Resin, Hydrogen Cycle (No. CST - 21); available in 1 lb. bottles from Eli Lilly and Company, Indianapolis, Ind.

(3) Carboxylic Acid Type Resin, Sodium Cycle (No. CTS - 3); available in 1 lb. bottles from Eli Lilly and Company, Indianapolis, Ind.

MARKING-INK POISONING

In a recent A.P.C. News Bulletin(4), mention was made of several instances of napthalene poisoning in babies resulting in severe hemolytic anemia. This poisoning occurred when diapers previously stored in naphthalene moth balls were used on the infants. A recent report in the literature(5) points out a similar hazard with diapers stamped with marking-ink. Six new-born babies in a maternity home developed varying degrees of cyanosis. This effect was attributed to aniline dye poisoning caused by the unfixed marking-ink used on the infants' diapers. One baby was severely affected and laboratory tests revealed the presence of methemoglobinemia. Intravenous methylene blue was effective in reliving the condition.

Since aniline dye is a common constituent of cloth marking-ink(6), it would appear that diapers as well as other infants' clothing used in the nursery should always be marked by means of a sewing machine rather than marking-ink.

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1. Elkinton, J. R., Clark, J. K., Squires, R. D., Bluemle, L. W., and Crosley, A. P., "Treatment of Potassium Retention in Anuria with Cation Exchange Resin", Am. J. Med. Sci., 220:548 (Nov., 1950).
2. Maher, F. T. and Broadbent, J. C., "Extracorporeal Hemodialysis in the Management of Acute Renal Failure", J.A.M.A., 166:609 (Feb., 1958).
3. Bellet, S., "The Cardiotoxic Effects of Hyperpotassemia and Its Treatment", Postgrad. Med., 25:602 (May, 1959).
4. News Bulletin No. 5, Arizona Poisoning Control Information Center, May, 1959, p. 2.
5. Ramsay, D. H. E. and Harvey, C. C., "Marking-Ink Poisoning — An Outbreak of Methemoglobin Cyanosis in Newborn Babies", Lancet, 1:910 (May 2, 1959).
6. Dreisbach, R. H., "Handbook of Poisons", Lange Medical Publications, Los Altos, California, 1955, p. 92.

STATISTICS OF 98 POISONING CASES IN ARIZONA DURING MAY, 1959

Age:	*Per Cent*	*Number*
Under five years	73.5	72
Six to 15 years	9.2	9
16 to 30 years	4.1	4
31 to 45 years	2.0	2
Over age 45	5.1	5
Not reported	6.1	6
Nature of Incident:		
Accidental	89.8	88
Intentional	10.2	10
Time of Day:		
Between 6 a.m. and noon	37.8	37
Between noon and 6 p.m.	35.7	35
Between 6 p.m. and midnight	14.3	14
Between midnight and 6 a.m.	2.0	2
Not reported	10.2	10
Outcome:		
Recovery	99.0	97
Fatal	1.0	1[*]
Causative Agents:		
Internal Medicines		
Aspirin	30.6	30
Other Analgesics	0	0
Barbiturates	5.1	5
Antihistamines	3.1	3
Laxatives	1.0	1
Cough Medicine	2.0	2
Tranquilizers	4.1	4
Hormones	2.0	2
Others	6.1	6
Subtotal	54.0	53

[*] Death resulted in a 71-year-old woman and was caused by an intentional overdose of a barbiturate).

External Medicines		
Liniment	0	0
Antiseptics	1.0	1
Others	0	0
Subtotal	1.0	1
Household Preparations		
Soaps, Detergents, etc.	1.0	1
Disinfectants	1.0	1
Bleach	2.0	2
Lye, corrosives, drain cleaners	3.1	3
Furniture and floor polish	1.0	1
Subtotal	8.1	8
Petroleum Distillates		
Kerosene	3.1	3
Gasoline	6.1	6
Others (Charcoal lighter fluid)	3.1	3
Subtotal	12.3	12
Cosmetics	5.1	5
Pesticides		
Insecticides	10.2	10
Rodenticides	0	0
Others	0	0
Subtotal	10.2	10
Paints, Varnishes, Solvents, etc.	4.1	4
Plants	0	0
Miscellaneous	4.1	4
Unspecified	1.0	1
TOTAL	100.0	98

WILLIS R. BREWER, Ph.D.
Dean, College of Pharmacy
The University of Arizona

ALBERT L. PICCHIONI, Ph.D.
Pharmacologist and Director
Arizona Poisoning Control Program

LINCOLN CHIN
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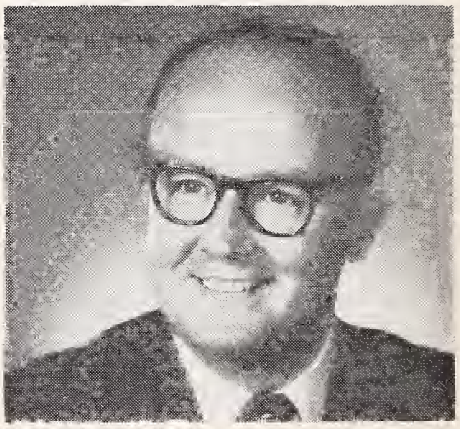

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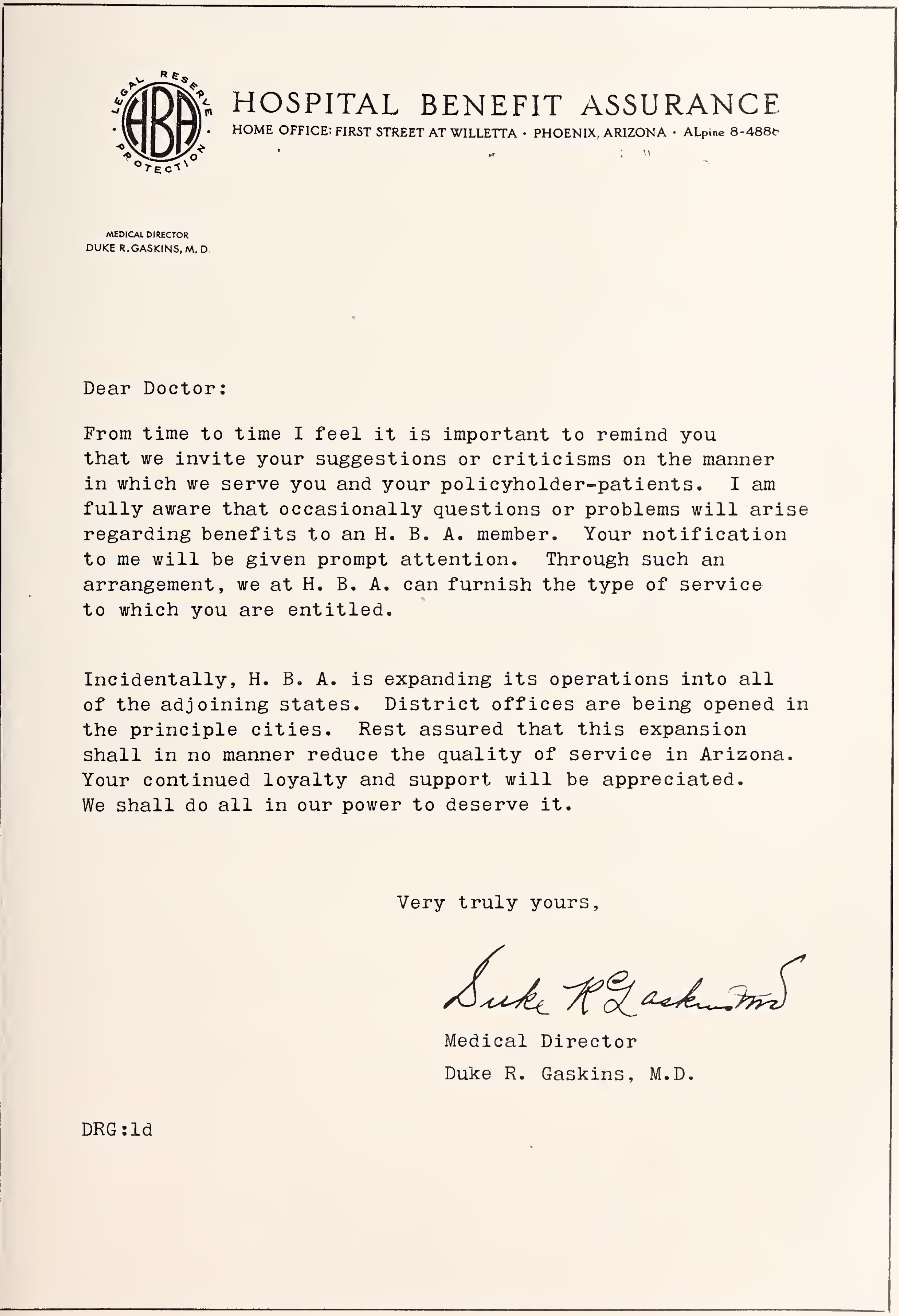

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MEDICAL DIRECTOR
DUKE R. GASKINS, M. D.

Dear Doctor:

From time to time I feel it is important to remind you that we invite your suggestions or criticisms on the manner in which we serve you and your policyholder-patients. I am fully aware that occasionally questions or problems will arise regarding benefits to an H. B. A. member. Your notification to me will be given prompt attention. Through such an arrangement, we at H. B. A. can furnish the type of service to which you are entitled.

Incidentally, H. B. A. is expanding its operations into all of the adjoining states. District offices are being opened in the principle cities. Rest assured that this expansion shall in no manner reduce the quality of service in Arizona. Your continued loyalty and support will be appreciated. We shall do all in our power to deserve it.

Very truly yours,

Duke R Gaskins MD

Medical Director
Duke R. Gaskins, M.D.

DRG:ld

THE ARIZONA MEDICAL ASSOCIATION, INC.

COUNCIL MEETING

MEETING of Council of The Arizona Medical Association, Inc., held April, 1959, Chandler, Arizona, convened at 2:10 P.M., Lindsay E. Beaton, M.D., Chairman, presiding.

MEMBERSHIP CLASSIFICATION CHANGES

MARICOPA COUNTY MEDICAL SOCIETY

It was moved, seconded and unanimously carried that Council approve Associate membership, dues exempt, for Morris Deitchman, M.D., retroactive to January 1, 1959, account of retirement from active practice, as recommended by the Maricopa County Medical Society.

It was moved, seconded and unanimously carried, that the request of Maricopa County Medical Society for Associate membership retroactive to January 1, 1959, for Garfield P. Schnabel, M.D., on account of retirement from active practice, be tabled. It was reported that Doctor Schnabel was being considered for membership in the Pima County Medical Society.

It was moved, seconded and unanimously carried that Seymour Fisher, M.D., member of the staff of the Veterans Administration Hospital in Phoenix, be granted Service membership, as recommended by the Maricopa County Medical Society.

PINAL COUNTY MEDICAL SOCIETY

James M. Walsh, M.D., by letter dated March 8, 1959, expresses appreciation for the honor granted in extending to him Fifty-Year Club membership in this Association advising that he will be present to receive the award to be bestowed during the forthcoming annual meeting.

Samuel D. Townsend, M.D., by letter dated April 27, 1959, expresses appreciation for the honor granted in extending to him Fifty-Year Club membership in this Association; however, expressing regret in his inability to be present to receive the award during the forthcoming annual meeting.

MEMBERSHIP REPORT – DUES DELINQUENTS

It was reported that nineteen members of this Association became delinquent in payment of their 1959 dues, as of April 1, 1959.

ARIZONA AMEF COMMITTEE

It was reported by the American Medical Education Foundation that A. L. Moore and Sons of Phoenix had contributed a sum of $1,000 toward medical education in behalf of the Arizona Medical Association. This is in line with the Association's recommendations that those individuals who customarily and in line with individual or company policy annually send Christmas gifts to physicians, contribute instead in the form of a donation to AMEF in the doctor's honor.

It was moved, seconded and unanimously carried that we request information from AMEF as to the names of all contributors to AMEF resulting from our actions in this regard and then acknowledge such contributions all at once time in the *Arizona Medicine Journal.*

It was moved, seconded and unanimously carried that we write a letter of appreciation to the Pharmaceutical Association in this regard.

CIVIL DEFENSE COMMITTEE

The AMA Council on National Defense by letter dated January 27, 1959, called attention to the legal implications in providing expanded medical and health services in a civil defense emergency or other disaster situation. Under large-scale disaster situations it might be necessary for allied medical personnel, such as dentists, veterinarians, nurses, and others to perform health and medical functions of a nature not usually performed by such personnel. In such event, the critical shortage of physicians will necessitate the full utilization of all such personnel. These groups, to the limit of their ability, must assume expanded responsibilities and duties for the management and care of mass casualties that, in normal circumstances, would be the province of the physician and surgeon. Question is raised as to whether or not in existing state Civil Defense Acts immunity and exemption provisions are contained therein?

It was pointed out by attorney Jacobson that we already have a provision in our Medical Practice Act that there is exempt from the requirements of licensure anybody rendering medical services in an emergency; it is not confined to allied medical personnel such as hospital personnel, nurses, and so on. It can be any layman. That is step one. We do not have an additional section which says that those who do so are or shall be exempt from suit. However, you can provide it by law because in another section, for illustration, the autopsy section of our laws specifically does provide an exemption from suit for those performing autopsies, after certain authorizations have been acquired, though we already have half of this and whether you want to add the other half in case of national defense on exemptions from suit is the policy decision Council will need to make.

It was moved, seconded and unanimously carried that we refer this to our Civil Defense and Legislation Committees, requesting them to consider this in joint session, with recommendations (to be reported) to Council.

ANNUAL MEETING DISCUSSIONS

Ruland W. Hussong, M.D., Chairman of the Civil Defense Committee, in his 1958-59 Annual Report of its activities, stated that it is the opinion a certain time of the annual meetings should be set aside for better planning by the doctors of this state to discuss the needs for disaster purposes.

It was moved, seconded and unanimously carried that this matter be referred to the Scientific Assembly Committee for consideration for the 1960 program.

FEE AND CONTRACTUAL MEDICINE COMMITTEE

INDUSTRIAL COMMISSION FEE SCHEDULE – SUPPLEMENTAL REPORT

Hayes W. Caldwell, M.D., Chairman of the Fee and Contractual Medicine Committee, by letter dated February 24, 1959, submitted a supplemental report following meeting held February 13, 1959, with members of the Industrial Commission in the matter of its fee schedule.

The Commission presented a statistical study of its experience since September of 1958, which indicated that medical procedures had steadily climbed since that date at 19 per cent to mid-December reaching 31 per cent greater than previously paid for such procedures. It is anticipated it will level at about 35 per cent which will reflect such per cent increase in fees over the 1953 schedule. It is recognized there are certain discrepancies particularly in the field of anesthesiology. Additional statistics, it is the hope, will be available for evaluation prior to the annual meeting of the Association April next; likewise, it is the hope that calculations can be applied to a unit factor of 500 sought by the Association. The Committee will await development by the Commission within the next approximately two months of additional figures which will then permit of continuing negotiations with it.

Doctor Smith, Secretary, reported that this Committee had again met last evening. No further report from the Industrial Commission had been received and it could find no objective evidence of good faith on its part. It was the general consensus that we should again try to bargain with them relative to the desires of the various specialty groups following receipt of report on their experiences as they are now operating.

It was moved, seconded and unanimously carried that we accept the report of the Committee as presented and read.

AMA COMMISSION ON MEDICAL CARE PLANS – RECOMMENDATION

Before Council for consideration is a report of the Commission on Medical Care Plans of the AMA, and request of the House of Delegates that the constituent association review the content of the report and submit its recommendation as regards (1) "Free Choice of Physician" and (2) "Closed Panel Systems".

The Kentucky State Medical Association reported the action of that body which affirmed the principle of "Freedom of Choice" of physician and opposed physician participation in closed panel systems.

The House of Delegates of the Colorado State Medical Society, it is reported, instructed its delegates to the national convention to "go on record as definitely opposing closed-panel systems of medicine inasmuch as they (panels) do not favor the principle of free choice."

Doctor Smith, reporting on the action of the Fee and Contractual Medicine Committee in meeting held last evening, advised that it was its unanimous recommendation "that we reaffirm our previous stand that we are opposed to any system of the practice of medicine which denies the patient a reasonable free choice of physician."

It was moved, seconded and unanimously carried that the Committee report be adopted.

VA FEE SCHEDULE – MEDICAL SERVICES – OUTPATIENT

Doctor Smith reported that the Veterans Administration sought this Association's approval of the adoption of a fee schedule applicable to Arizona associate with medical services rendered in its outpatient program. On two occasions the Fee and Contractual Medicine Committee has received from the VA recommended fee schedules. Schedule M-1 recently filed was reviewed and following due deliberation the Committee went on record as rejecting the schedule as presented and recommending to Council that a plan be formulated based on the unit value of 500 for medicine and 475 for surgery.

HISTORY AND OBITUARIES COMMITTEE

The History and Obituaries Committee recommends that the collection of medical historical material of the late Orville Harry Brown, M.D., of Phoenix, be properly bound. The committee has sorted, pasted and alphabetized the nineteen hundred odd items which Doctor Brown collected and it cherishes the wish that this will be the first document in a projected archives of History of Medicine in the State of Arizona.

It is further recommended that a prize of $50.00 be set up as an award for essays, or other historical writings on medical history in our state. It is the thought that this could be offered to the students in the department of history who are in a College or University in Arizona. This might stimulate a certain amount of interest amongst the professional historians in the state who would therefore add further material to this projected, medical historical Archive.

It was moved, seconded and unanimously carried that we authorize binding and suggest that we not offer a $50.00 prize for history students at this time.

LEGISLATION COMMITTEE

KENTUCKY LEGISLATION – PANEL PRACTICE

In accord with direction of Council, the Legislation Committee in meeting held February 15, 1959, studied the proposed Kentucky Bill dealing with "Panel Practice" in the light of introduction of a similar measure in the Legislature of the State of Arizona. It was concluded that in view of the fact that this question is now before the AMA and possibly will be given consideration by its House of Delegates at the annual meeting in June next, it feels that it is premature for it to take action at this time.

Doctor Hamer pointed out that this Council and the House of Delegates of this Association had not rescinded its action taken two years ago on this matter of panel practice; accordingly, he advised that this should be our policy. Generally, it was to the effect that the members should be discouraged in joining any of these panel systems, unless approved by the Council. It was suggested that a copy of the original resolution adopted by the House of Delegates of this Association be filed with the AMA.

UNIFORM HAZARDOUS SUBSTANCES ACT

Resolution No. 3, adopted by the House of Delegates, May 3, 1958, resolving that action be taken by the Legislation Committee toward providing a legal requirement of not more than one per cent lead content in paints marketed in Arizona on or for toys and nursery furniture or interiors of dwellings was considered by the committee. Associate with this action, there was reviewed a proposed "Uniform Hazardous Substances Act" submitted by the AMA Committee on Toxicology, intended as a model for uniform laws to require the declaration of hazardous ingredients and warning statements on the label and in the accompanying literature of chemical products. It was considered advisable that counsel determine the need for introduction of a measure dealing specifically with poisoning or whether possibly some existing law might be modified by amendment to achieve such objective and, possibly at the same time, provide also for hazardous substances labelling contained in the model act submitted by AMA. The Committee was unanimous in determining that every effort be made to introduce a model act on toxicity to cover all the toxic substances as requested by the AMA. This recommendation was referred to Council for further consideration and direction.

It was moved, seconded and unanimously carried that this be referred to our legal counsel for study and construction.

PATIENT STERILIZATION PROCEDURE – BOARD COMPOSITE – STATUTORY AMENDMENT

Again, consideration was given to the possible change in the statutory requirements dealing with sterilization of inmates at the Arizona State Hospital on petition of the Superintendent, particularly as pertains to the appropriate body (currently the Board of Medical Examiners) to be designated to hear such cases. The Legislation Committee recommended that Council cooperate with the State Bar to the end that a committee be appointed representative of each group (this Association and the State Bar) to work with the Board of Medical Examiners on the problem of statutory procedure in an endeavor to establish an appropriate board or agency composite and defining its duties in the handling of such procedures.

STATE HEALTH COMMISSIONER – QUALIFICATIONS AND SALARY

The Arizona Tuberculosis and Health Association and the Arizona Division of the American Cancer Society expressed interest in promoting legislation establishing suitable qualifications and salary for a State Health Commissioner and seeking support of this Association. It was considered wisdom by the Legislation Committee to withhold specific action pending introduction of a measure in the first session of the Twenty-Fourth Legislature of this state; however, Council is informed that the Committee has considered the problem; that it is heartily in accord with the suggestions presented by the Cancer and Tuberculosis and Health groups; and that in all probability the relationship between the Legislature and the State Health Department will continue to improve to realize the objective sought in broadening the qualifications and salary of a State Health Commissioner. Correspondence has been initiated with each of these groups indicating the Committee's willingness to act in an advisory capacity, encouraging the societies to initiate the preparation and introduction of an acceptable measure.

H. R. 4700 (86TH CONGRESS) SOCIAL SECURITY HEALTH BENEFITS FOR THE AGED

Doctor Hamer reported on the status of H. R. 4700, amending the Social Security Act, providing for health benefits for the aged, introduced in the 86th Congress in February last and popularly known as the "Forand Bill." While it is the hope this measure will not be enacted into law, the AMA Legislative Committee is concerned over the action of the Senate Educational and Labor Committee in securing passage of an amendment to this bill which calls for the creation of a Subcommittee on Aging, specifying appointment of certain Senators to the committee. Doctor Hamer, together with representatives of the AMA Washington office, conferred with Arizona's Senator Goldwater in Washington last week in the light of this development. The committee is known as the McNamara Committee of the Senate, comprising four Democrats who probably will favor the Forand Bill, together with two Republicans, Senators Dirksen and Goldwater, minority members. At the adjournment of Congress, it is planned this committee will conduct a series of twenty hearings throughout the country on the medical care of the aged. Senator Goldwater was briefed on the measure and encouraged to take an active part in the appointment of advisors to the committee, especially as pertains to the medical profession and insurance industry. A Mr. Spector, borrowed from the Advisory Committee to the Committee on State Governments of the Senate, has already been assigned as consultant, an attorney working full time on the assignment.

COUNCIL POLL

For the record, the results of the mail poll of Council in February last as pertain to H. B. 212 of the Twenty-Fourth Legislature of the State of Arizona, dealing with prohibition of the sale of raw milk, was eighteen Yeas, no Naes, one Not Voting; H. B. 265 providing for the reporting of cancer cases, including the name of the patient, there were eleven Yeas, one Yea with a proviso, and six Naes. The Chairman called attention to the fact that a point has been raised here; we are on record as approving the inclusion of names in cancer reporting and yet there are strong feelings here and apparently very strong feelings in both houses of the Legislature unfavorable to the passage of legislation providing for cancer reporting with inclusion of the patient's name.

It was moved, seconded and unanimously carried that we rescind all of our previous action on this issue (cancer reporting); that we address a letter to the Cancer Society encouraging them to continue every effort to figure out a way to report cancer statistics so that they will be of some value.

AMA LEGISLATIVE "KEY" MAN – APPOINTMENT

It was announced that the Board of Trustees of the American Medical Association appointed Jesse D. Hamer, M.D., as its legislative "key" man for the State of Arizona, for the year 1959. Doctor Hamer has accepted this appointment.

CHIROPRACTIC – OSTEOPATHIC LEGISLATION

Attorney Jacobson reported on legislation activities for the past year, indicating that the Association had sponsored no legislation in the recent session of the Legislature and that there were two major pieces of legislation presented by fringe practitioners, including a Chiropractic Bill and an Osteopathic Measure. Neither were enacted.

PROFESSIONAL BOARD

WHIPLASH INJURIES

On requested advice from the Western Orthopedic Association, it is the unanimous opinion of that group that the term "cervical whiplash" is a completely untenable term and all attempts should be made to exclude it from medical literature. It is its feeling that the term should have some clarification, both among doctors and lawyers, on a sound, scientific basis. Referable to the term "cervical whiplash," as related to neck injuries in medical-legal problems, the Professional Board determined that, as applied generally to this type of injury, it is considered poor terminology. It is recommended that those of the medical profession who use it in court, qualify the term with the actual mechanics which result in neck sprain.

It was suggested that Doctor Craig include this recommendation in his report of the Committee on Reports to be submitted to the House of Delegates Thursday, April 30, 1959.

POLIO INOCULATION PROGRAM

Associate with Polio Program, in cooperation with the Arizona Society of Pediatrics and the American Medical Association, it has been determined to initiate a drive to make all families aware of the recommendation that they all have three injections of polio vaccine, and that all county medical societies meet with the local health department creating study groups to survey the polio immunization problems and work out a program to solve them. The Board recommends proceeding along the lines of recommendations of the AMA House of Delegates, in polio inoculations, that three phases are necessary: (1) the first should involve all preschool age children; (2) then, the children in school of all ages; and (3) then, those adults under age forty who are still in a highly susceptible group. Therefore, everybody, regardless of age, should be encouraged to get the three shots while there is still plenty of vaccine available. The matter of the fourth polio shot must be mentioned because of the publicity it has had. The Board further recommends that we cooperate completely with publicity informing all individuals of the polio inoculation program, especially those who have not been inoculated, placing the pressure on the county societies to implement such publicity rather than from the state level.

It was moved, seconded and unanimously carried that we forward these recommendations from the Professional Board to the local county societies.

SEMINAR PROGRAM

The need for closer liaison with the specialty groups of this state and the need for education on polio, aging, mental health and other medical problems, raised question on the feasibility of the Professional Board recommending to Council that it be appointed a permanent program committee for the Scientific Sessions of the Association's annual meetings. It is the hope that continuing membership of the Professional Board would provide a continuity of program material for the better education and information of the profession in this regard, replacing the activities of the subcommittee on Seminars, which has apparently outlived its usefulness. It was suggested that the Board might consider requesting the Scientific Assembly Committee to allocate a given amount of time, perhaps two or three hours of the scientific meetings, to the Board for its seminar program. It is intended that these thoughts be passed along to Council for its review and direction.

It was moved, seconded and unanimously carried that this portion of the report (of the Professional Board) not be accepted or approved.

AMA — REHABILITATION PROGRAM

The Committee on Rehabilitation of the American Medical Association urges the medical profession to accept its responsibilities in the field of rehabilitation by initiating leadership at the state and community levels. Medicine faces an urgent problem today in attempting to restore increasing numbers of disabled and handicapped citizens to useful lives.

The first step in medicine's "back to work" rehabilitation plan calls for state and county medical societies to set-up committees on rehabilitation. The second step suggests that county medical societies survey existing rehabilitation facilities and report to the state society so that a complete picture or rehabilitation facilities in the state can be compiled. Such information at the state level would make it possible to determine on a national basis the extent to which rehabilitation facilities have been developed.

It was directed that this item of business be referred to the Professional Board.

PROFESSIONAL LIAISON COMMITTEE

FLUROSCOPIC SHOE FITTING — LEGISLATION

The chairman briefed Council on recommendation of the Professional Liaison Committee in that in joint meeting with a like committee of the Arizona Chiropodist Association on February 1, 1959, it was determined that the use of fluroscopic devices and X-ray in the fitting of shoes resulted in a serious hazard of excessive radiation to the foot.

The Professional Liaison Committee, believing this point to be well taken, recommends that this problem be referred to the Legislation Committee of the Association with the further recommendation that it works with a like committee of the Arizona Chiropodist Association to sponsor such legislation.

It was moved, seconded and unanimously carried that this be referred to our Legislation Committee.

JOINT DECLARATION OF PRINCIPLES — PHYSICIANS AND ATTORNEYS — RESOLUTION

The State Bar of Arizona in convention on April 11, 1959, by resolution, adopted a proposed "Joint Declaration of the State Bar of Arizona and Arizona Medical Association of the Principles Applying to the Relationship Between Physicians and Attorneys," filing with this Association an official copy of the resolution referred to. Previously, the members of Council were furnished preliminary copies for review.

It was moved, seconded and unanimously carried that a similar resolution be prepared in proper form and presented to our House of Delegates for consideration.

It was further reported by Mr. Calvin H. Udall, Chairman of the Medico-Legal Committee of the State Bar of Arizona, that its Board of Governors, at a meeting held in Tucson in November, 1958, authorized its Medico-Legal Committee to contact the appropriate committee of the Arizona Medical Association for the purpose of jointly establishing boards or panels on a local basis, which panels, or the members thereof, would consider complaints and suggestions from either of the associations, or of the individual members thereof against or concerning a member of the other association. The names of the lawyer chairmen selected on a regional basis constituting members of its panel were submitted.

PUBLIC RELATIONS BOARD

ARIZONA SCIENCE FAIR — CENTRAL AND SOUTHERN REGIONS

Mr. Ernest E. Snyder, Coordinator of the Central Region — Arizona Science Fair, Arizona State University, acknowledges with appreciation receipt of this Association's contribution of $50.00 toward the Science Fair of the Central Region.

Mr. Robert L. Nugent, Executive Vice President, Southern Arizona Science Fair, University of Arizona, acknowledges with appreciation receipt of this Association's contribution of $50.00 toward the Science Fair of the Southern Region.

Doctor Polson stated that it is his understanding there is now a Northern Region recently activated and it is anticipated a similar request will be forthcoming next year from that group.

ARIZONA DIETETIC ASSOCIATION — FILM CO-SPONSORED

The Arizona Dietetic Association advises it is desirous of arranging a showing over KOOL-TV of the AMA film "The Medicine Man," a joint project of the National Better Business Bureau and the Food and Drug Administration, and requests this Association to co-sponsor the program.

Doctor Polson stated that his investigation of the film indicated that it was exceptionally well done and that members of his Public Relations Board contacted expressed approval of co-sponsorship by the Association.

It was moved, seconded and unanimously carried that we co-sponsor the showing of the film "The Medicine Man" with the Arizona Dietetic Association.

SAFETY COMMITTEE

"DRUNKEN DRIVING" LEGISLATION

The Safety Committee reported in the matter of allegation of the Honorable Douglas S. Holsclaw of Tucson to the effect that on several occasions, a doctor's certificate indicating a medical disability of a person was used as a means for that person to avoid serving a jail sentence for a first offense involving "drunken driving." Discussion ensued as to the propriety of either the Safety Committee or the Association assuming jurisdiction in the problem.

It was moved, seconded and unanimously carried that the appropriate (county medical) society take action through its own Grievance or Professional Committee; and that the Safety Committee be so informed.

WOMAN'S AUXILIARY – 1959-60 PROGRAM AND BUDGET REQUEST

Mrs. Hiram Cochran, President-elect, Woman's Auxiliary to the Arizona Medical Association, by letter dated March 23, 1959, presented to the members of Council that organization's proposed 1959-60 program. An appropriation of at least $1,000 was requested.

It was moved, seconded and unanimously carried that we approve it and appropriate the money, at least but no more than $1,000.

FINANCIAL

1958-59 *FINANCIAL REPORT – BUDGET OF APPROPRIATIONS*

Doctor Yount presented the Treasurer's report including the CPA's annual audit of the Association's books for 1958-59 for Council's review.

It was moved by Doctor Craig, seconded by Doctor Yount and unanimously carried that we accept the Treasurer's report.

Discussion ensued regarding the budgeted expense ($3,000) for the Publishing Committee. Doctor Craig read the combined report of the Editor-in-Chief and the Publishing Committee for information of the Council.

It was moved by Doctor Manning, seconded by Doctor Polson and unanimously carried that this matter be presented to the House of Delegates through a resolution to be prepared by the Chairman of Council to the effect that the Association publish its Journal in order that its wishes in this regard may be determined.

It was determined that the Treasurer's proposed budget of appropriations for 1959-60 be accepted and that a resolution be prepared and presented to the House of Delegates, including the recommendation that the dues for the fiscal year 1959-60 be continued at $70, including $10 for AMEF.

CONFERENCE OF PRESIDENTS – DUES

A billing for dues from the Conference of Presidents and Other Officers of State Medical Associations in the amount of $50.00 for the year 1958 and $50.00 for 1959, totaling $100.00, was presented for payment authorization. This matter was referred to Council to determine its desire as to continuing Conference participation.

It was moved, seconded and unanimously carried that we approve payment of this billing.

SECURITY BUILDING – OWNERSHIP TRANSFER

For the information of Council, it was reported that negotiations had been concluded by the Valley National Bank for the sale of The Security Building to the David H. Murdock Development Company, effective April 1, 1959. The lease of the premises occupied by this Association will expire September 30, 1959.

OFFICE EXPENSE REIMBURSEMENT

Clarification and direction was sought by the Secretary as to procedure to be followed by the Secretary and Treasurer in honoring and paying expense vouchers presented by Officers of the Association seeking reimbursement for monies expended when engaged in Association business.

It was moved, seconded and unanimously carried that the Central Office Advisory Committee consider this matter and report to Council at its next meeting.

COMMUNICATIONS

AMA RESOLUTIONS – GENERAL PRACTITIONER OF THE YEAR

Two resolutions adopted by the AMA House of Delegates in Minneapolis December last are brought to the attention of this Association for its information: (a) that the American Medical Association bring to the attention of the Deans of medical schools and officers of medical societies the desirability of having certain general practitioners of the year as guests at meetings where students and younger physicians are present; and (b) urging that constituent associations make every effort to provide a type of membership for the armed forces, Public Health Service and the Veterans Administration physicians which will enable them to become active members of constituent associations and of the American Medical Association.

UNITED STATES PHARMACOPOEIAL CONVENTION INC.

Allen H. Brunce, M.D., President of the United States Pharmacopoeial Convention, by letter dated January 15, 1959, submitted a formal call for its 1960 meeting suggesting that this Association send one delegate to the convention. It was pointed out that the delegate to the 1960 meeting of the Convention bear a serious responsibility, since upon their actions largely depends the maintenance of the integrity and usefulness of the Pharmacopeia and its high prestige among pharmacopeias of the world.

It was directed that more information be sought regarding this Convention.

1960 *ANNUAL MEETING SITE*

Invitations were extended to this Association to hold its 1960 Annual Meeting using the facilities of (1) Adams Hotel, Phoenix; (2) Arizona Manor, Phoenix; (3) Camelback Inn, Phoenix; (4) Safari Hotel, Scottsdale; (5) San Marcos Hotel, Chandler; and (6) Westward Ho Hotel, Phoenix.

Both the Scottsdale Chamber of Commerce and the Tucson Chamber of Commerce present the advantages and available facilities of their respective localities as convention cities and extend a cordial invitation and welcome to this Association should it select either city for its 1960 meeting.

AAPS ESSAY CONTEST

Lavern D. Sprague, M.D., of Tucson, referring to the AAPS Essay Contest and "controversy" thereon which developed this year, urged Council to recommend sponsorship of the 1960 Contest by the Woman's Auxiliary of this Association.

It was moved, seconded and unanimously carried that this be referred to the Woman's Auxiliary for whatever their desired action.

NATIONAL FOUNDATION – HEALTH SCHOLARSHIP COMMITTEE

Thomas M. Rivers, M.D., Vice President – Medical Affairs, The National Foundation, by letter dated April 14, 1959, announced the appointment of Leslie B. Smith, M.D., as a member of The National Foundation's Health Scholarship Committee for Arizona. Doctor Smith has accepted the appointment.

OTHER BUSINESS

INSURANCE PLANNING COMMITTEE
HEALTH INSURANCE COUNCIL – SIMPLIFIED CLAIM FORMS

Noel G. Smith, M.D., Chairman of the Insurance Planning Committee advises that it is the considered opinion of the committee that the standardized simplified claim form, as submitted by the Health Insurance Council, represents a possible solution to this great problem of multiplicity of forms with which we have been faced in the past. In its opinion, these forms should be approved by the Medical Association; however, it is its understanding that at the present time these forms have not been accepted by the Insurance Industry on the whole; therefore, it is its recommendation that we go on record favoring the simplified claim forms as presented to us and further recommend the adoption thereof providing the Health Insurance Council can assure us that these forms will be acceptable by the entire Insurance Industry.

It was moved, seconded and unanimously carried that it (this matter) be tabled until we hear from them.

LESLIE B. SMITH, M.D.
Secretary

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THE ARIZONA MEDICAL ASSOCIATION, INC.

PROFESSIONAL COMMITTEE

MEETING of the Professional Committee of The Arizona Medical Association, Inc., held Sunday, May 17, 1959, John R. Schwartzmann, M.D., Chairman, presiding.

COMMITTEE ANNUAL REPORT

Doctor Schwartzmann requested the Central Office to forward to each member of the Professional Committee, a copy of the 1958-59 Annual Report of the Professional Board we prepared and presented to the House of Delegates on April 30, 1959.

GENERALIST AND SPECIALTY GROUPS — LIAISON

As previously directed, contacts have been made with the generalist and specialty groups seeking their appointment of individuals among them who may be contacted, from time to time, by members of this Committee seeking advice and answers to questions arising and thereby establishing closer liaison in the various fields of medical practice. It was requested that a "Roster" of the appointees be immediately prepared and distributed among the members of this Committee for their use.

CERVICAL WHIPLASH INJURIES

The Chairman read letters from Doctor Thomas H. Taber, Jr. of Phoenix, dated February 9, 1959, and Doctor Lindsay E. Beaton of Tucson, dated October 10, 1958, responding to inquiry of this Committee in the matter of "whiplash injuries."

Doctor Schwartzman: In the Annual Report to the Commission on Accidental Trauma of the Armed Forces Epidemiological Board for the period April 1, 1958 to March 31, 1959, by the Automotive Crash Injury Research of Cornell University, there is a section on Whiplash Injury. It must be recognized that observations of situations described involving automobile accidents relate to percentages of 1.1 of total occupants and 1.6 of injured occupants having whiplash injuries in this type of mechanics of applied force. It is pointed out that relatively there are few real mechanical injuries that can be classified accurately as "whiplash." The symptom complex and pattern of pain, etc., is the same in their percentages of 100 or 1 but the mechanics is the thing they are trying to break down and they conclude a cervical injury in injury producing accidents is infrequent. Cervical injury produced by head and neck "whiplash" phenomenon is even rarer. Of the small group so injured, cases described as having "whiplash injury" are seldom associated with clear-cut clinical diagnosis of serious cervical injury. Now, that's the important part of this; that objectively there are not many signs in them; then, you can go along with the 1 per cent of real injuries but subjectively and with temporary aggravating objective signs, there are a lot more than 1 per cent. Now, Doctor Beaton and I both started once to go over some 800 of these that we've seen and I am sure and I know that there are better than 55 per cent of them that have objective signs somewhere along the way, which doesn't confirm this 1 per cent they are describing.

It was moved, seconded and unanimously carried that we recommend that the state Association in its next scientific meeting consider a panel by able individuals in the various branches of medicine to touch on this problem to help clarify it both medically and medicolegally and give at least some information with respect to guiding doctors in using the term or clarifying the term in court.

POST GRADUATE COURSES

PEDIATRICS SEMINAR

Charles A. Thompkins, M.D., of Tucson, by letter dated March 19, 1959, proposed that consideration be given to the conduct of possibly a two-week post graduate course to be offered to general practitioners and pediatricians. Presentation would be by practicing physicians on a "grass roots" level. The program would be "preventive" and "becoming" pediatrics, including emotional and physical development, the former to be conducted by the psychiatric group. Such meeting should be held at the close of the tourist season in which event the families could participate. As to finances, a registration fee could be charged to cover the expenses of the speakers and possibly a firm such as the Ross Laboratories who have conducted seminars, or any others, might finance the promotion, advertising and printing of the procedings.

It was moved, seconded and unanimously carried that we recommend to the Board of Directors that favorable consideration for such a proposed teaching seminar be offered; that the Professional Committee sees no reason why it should not be supported by one of the private companies, if needs be, or partially so; but that we also recommend that serious consideration for this type of meeting be given to presentation at the state meeting level so that it will cover all, as well as those who would go to it on an annual basis; and that Doctor Semoff's wide experience in putting on seminars be offered as a means of aiding Doctor Tompkins.

NORTHERN ARIZONA MEDICAL SEMINAR

Doctor Currin reported that the Coconino County Medical Society was sponsoring a Northern Arizona Medical Seminar in Flagstaff to be held August 6 and 7, 1959, and hoped that it would become an annual affair.

THE NATIONAL FOUNDATION — NATIONWIDE TREATMENT AND EVALUATION CENTERS

The Committee at its last meeting held discussion on the subject of The National Foundation entering other fields of endeavor and it was directed that the groups affected be contacted as to their feeling in this regard.

CENTRAL ARIZONA CHAPTER ARTHRITIS AND RHEUMATISM FOUNDATION

The findings of its Board of Governors, in complete accord with the thinking of the Medical and Scientific Committee of the chapter, voted at its regular meeting April 21, 1959:

"The autonomy of local chapters is important and must be safe-guarded; to this The National Foundation gives no assurance. The concept of local authority in the Chapters is so divergent in the two organizations that merger is not feasible.

"Since The National Foundation does not apparently cover any care of arthritics past the age of eighteen (and involves a very small minority of patients therefor) and since they are limiting themselves so narrowly, it will probably have very little affect on the problem of arthritis, locally or nationally.

"If the work on the problems of arthritis were adequately supported, the benefit that arthritics could receive would be superior.

"Attention should be called to the following statement made last year, which expresses the feeling of all of the other Chapters in the country, as well as the Arthritis and Rheumatism Foundation: 'In the ten years of its existence the Arthritis and Rheumatism Foundation has been the leading sponsor of medical and scientific work in this field; it has more than fifty chapters throughout the nation; its membership includes virtually all of the leading medical and research people in the field of arthritis and rheumatism; it enjoys the closest possible working relationship with the American Rheumatism Association, the professional body of twelve hundred arthritis specialists in the United States; it works closely with the National Institute of Arthritis and Metabolic Diseases of the United States Department of Health, Education and Welfare.'

"The Medical and Scientific Committee of the Chapter was reminded that it had previously said that if a clinic were developed, it should be in connection with a hospital having an intern program and that money for this purpose should not be included in the budget."

CEREBRAL PALSY FOUNDATION OF SOUTHERN ARIZONA, INC.

"It is our opinion that the fundamental principal of setting up treatment and evaluation centers for helping arthritic and rheumatism sufferers is to be highly commended. However, it is our understanding that there is already in existence a foundation for the express purpose of solving the problems of the rheumatism and arthritic sufferers. We therefore object to the duplication of having two national organizations dedicated to the same end. We feel that the duplication of the administration and overhead costs is one that could be eliminated by having one organization direct all the work being done in reference to this specific disease.

"The matter of duplication of services in connection with community supported health projects was within the past few years a problem within our own organization. It was discovered that there was duplication existing between the Cerebral Palsy Foundation in Southern Arizona and with the Crippled Children Division program here in Tucson. With mutual understanding, this duplication was eliminated through cooperation with the physicians and both organizations so that now a cooperative effort exists in Tucson for the handling of the Cerebral Palsy child so as not to have any unnecessary duplication of effort. As an organization which would not tolerate such duplication within its own framework, we certainly could not condone similar duplication on a national scale."

MARICOPA COUNTY SOCIETY FOR CRIPPLED CHILDREN AND ADULTS, INC.

"I don't suppose there is a satisfactory formula for determining the number of rehabilitation centers needed throughout the country. However, here in our community I'm sure that the medical profession and lay-people alike would take a 'dim view' on an additional charitable facility being constructed, equipped and staffed for the treatment of arthritics. Our Center provides services to all disabled that need such service including the arthritics. A recent survey of twenty-seven comprehensive centers in the U. S. made by the Conference of Rehabilitation Centers, pointed out that the total number of clients being served, seven per cent were arthritic or rheumatic. Here at Gompers, during our first year of operation, eight per cent of the total patients treated were of this classification. If our community is to make the most effective use of available professional personnel who are in short supply, operate at the lowest possible unit cost, make the best use of current rehabilitation knowledge, then it (the community) should utilize present facilities and should assist in the improvement of these services for the arthritic. This philosophy is shared by our Board of Directors.

"Relative to the question of The National Foundation invading the field of arthritis, there is no unified opinion from our group on this subject at this time."

CHAPTER ADVISORY COMMITTEE MEETING – SAN FRANCISCO – REPORT

Dr. Semoff: The most important part of the program was a presentation of their expanded program. The thing they were trying to show was that virus research has always been a part of their program, not specifically just polio; that the experience gained in the management of poliomyelitis which has to do with the principles of deformity, correction of deformity. developing respiratory aids, braces, team approach, patient education — all have a very common application to these diseases and in the care of them, and therefore, it was easy for them to see that they would be only expanding their program rather than going into a new one. Their three basic tenets were: research, professional education and medical care. As far as research is concerned there can never be a duplication in this regard.

They explained next how The National Foundation operates, its organization, etc. I raised three questions which I have raised here before and which I thought we would like to know about. They were: (1) initially, who elects the Board of Trustees, who in turn elect their own officers; (2) who elects the medical advisors; (3) who sets the policies? I received complete silence at first and they seemed embarrassed by the questions. Their Board of Directors is a self-perpetuating board. Their program comes from the top down and was just given to the local and state Chapters. The Advisory groups are appointed by this self-perpetuating Board and while they say they never overrule their Advisory committees, this is still not my idea of good practice, nor is it a democratic way of operation. In their Annual Report, they list all of their collections, where they came from and what they did with them and it makes a beautiful picture; but they never explain this Board feature.

They have only five paid workers in their entire fund raising structure and these people come up from the field. In 1957, 80 per cent of their funds went into research, yet this represents only 1 per cent of all medical research in this country; and yet their whole attitude on the question of why should this organization get into the research field, they say: if private organizations don't do it the Federal Government is going to do everything, yet they represent only 1 per cent. This is their main point and yet I'd guess the government is now doing 90 per cent of it.

When we got down to the basic things, they admitted that this really was only an idea — this expanded program. This was going to depend on the amount of funds that they could collect and their basic problem, they promised, would always be polio. They will expand only in the amount of available funds they had free and unappropriated to polio and research in that field, and they report that their funds this year approximate those of last year, so they couldn't go far afield.

They also admitted that when they took over polio, they agreed to take it 100 per cent from diagnosis right through rehabilitation, etc., and they now realize this was wrong; that the patients themselves should have to stand up to it; and in so many cases where they had taken over completely, the patient had said: well, o.k., you do it all. They promised not to make that mistake on any future project.

It was developed by the participating groups that there should be a closer communication with the medical profession; that teams from headquarters should go to the local medical societies to discuss and interpret policies before they are put in operation; that if the janitor should be paid, so should the physician; they should foster more individual responsibility among patients; and they should endorse research and education in the allied fields but to get polio whipped first. Doctor William Clark, Director, Department of Medical Care, summed up the position of The National Foundation as follows:

1. Polio was and will always be the primary target. The expanded program concerns only a future outlook, if funds are available (this year's funds will only approximate last year's).
2. All programs will be flexible, not specific.
3. Cost of illness must be shared by the patient.
4. Programs must complement and augment needs.
5. Communications with physicians have been poor and will be improved.
6. Fair fees for services.
7. Criteria for chapter care will depend on local need.
8. Expanded research along lines discussed will be fostered.
9. Long term polio patients need to be evaluated.
10. Priority of diseases will depend on local need.
11. Development of centers to serve in consultation.

This is as far as they would commit themselves. Certainly, there is still need for fighting polio. It is long from being licked. We've got to push the vaccine program, etc., and this was agreed to by everybody.

Dr. Salsbury: To me, this is a demonstration of the fact that we have reached a saturation point in some of these voluntary agencies. They are stumbling over one another.

Dr. Semoff: The second morning was given to a discussion of the status of polio vaccine and vaccinations. The National Foundation is attempting to get a complete series for those not vaccinated. While there are many who have not completed their Salk immunizations, 56 per cent of our nation has had no immunizations. The experience in the Michigan and New Jersey epidemics has shown the danger in the "hard core" areas. These areas gave as their principle reason for not availing themselves of the vaccine as just plain apthy, fear and delay. The least important reason for not availing themselves of the vaccine was finances. This deficiency must be met at the local levels: (1) to identify the danger spots; and (2) to push the vaccination drive.

Dr. Salsbury: So far this year there has been reported four polio cases and one tentative diagnosis. Of the four cases reported, all are of the paralytic type and by county, age and vaccination status are listed below:

County	*Age*	*Vaccination Status*
Apache	2	V-O
Maricopa	27 mos.	Unknown
Navajo	2	V-O
Yuma	9 mos.	V-O

Dr. Schwartzman: This is where Doctor Salsbury can help, i.e., that vaccine be pushed not only in school, pre-school and young adults but in all age groups up to age 40 at least towards saturating the State with vaccinations. We should get the state Association to initiate this at the county level, both in newspapers as well as in the bulletins to members, and also endeavor to whip up interest to get this done.

It was moved, seconded and unanimously carried that the following resolution be adopted by this committee and that its content be forwarded to the Board of Directors of the Association for its consideration and approval:

WHEREAS, the value of The National Foundation and its program for the treatment of polio and development of polio vaccine is recognized as a great service to the health of the Nation, fully appreciated by the medical profession of this State; and

WHEREAS, it is reported that 56 per cent of the people of our country have had no vaccine immunization whatsoever; and

WHEREAS, the previous Michigan and New Jersey polio epidemics have shown the danger of the "hard core" areas wherein people have not availed themselves of vaccine immunization because of apathy, fear and delay but not of finances; and

WHEREAS, it is the feeling of many that it will be a long time before the problem of polio is fully resolved; now, therefore, be it

RESOLVED, (1) that we suggest the primary effort of The National Foundation should be towards a continuation of its polio program; (2) that any surplus monies it may have now or may acquire in the future be appropriated for use only to supplement financially and advisorily the efforts of existing, well organized and working groups interested in the eradication of other diseases in which The National Foundation has or may develop interest, thereby preserving and respecting the autonomy of such groups; and (3) that there appears no need for organizational duplication and effort; and be it further

RESOLVED, that the Association continue and increase its efforts, through its component societies and with the cooperation of the public health departments, to fully support the polio vaccine immunization program to the end that not only pre-school children, school children and young adults receive the polio vaccine inoculations, but that all age groups up to at least age 40 be so immunized; and that adequate publicity be given to stimulate public interest in and acceptance of this most worthwhile project.

TRANSFER OF PREPAID MEDICAL SERVICES FROM BLUE CROSS TO BLUE SHIELD

The Chairman reported that no response to previous discussions relating to the transfer of premedical services from Blue Cross to Blue Shield has been received from the Pathology group. It was agreed that the Chairman will summarize the discussions and report to the Committee at its next meeting for any action indicated.

SUBCOMMITTEE REPORTS

Dr. Wormley: My report consists of excerpts and statements taken from the various meetings which I thought would be of interest to you.

At the Salt Lake Conference, an eight-state roundup, Doctor Hammer was our representative. Statements were made by J. F. Follmann, Jr., New York insurance expert, that "six million persons over sixty-five are now covered under voluntary programs"; also, "these constructive programs will relieve the government and the tax structure from the necessity of providing medical care for a large segment of the citizenry." Doctor James A. Shown, Great Falls, Montana, stated: "Every profession, occupation, industry, labor organization, religious denomination, community, and – ultimately and basically – every family unit must share in this responsibility;" further, "it is time that the nation restore the basic dignity of man to the aging citizen." Doctor Louis M. Orr, Orlando, Florida, President-Elect of the American Medical Association, stated: "the needs of our senior citizens are far more numerous than just health needs. They include occupational, economic, social and psychological needs." Doctor Edward L. Bortz, Philadelphia, Past-President of the American Medical Association, stated: "The current practices of paternalism only encourages dependancy and conditions vast numbers of citizens to personal ineffectiveness. Society must learn to use the talents of older people and quit stressing security and dependance for the aged. To be healthy, they must be self-supporting."

The Cochise County Medical Society submitted a report of its Committee on Care of Aged at County Level, by Doctors James S. Walsh and Edward W. Adamson, stating that the aged in Cochise County fall into two distinct classes: (1) bonafide indigents; and (2) low individual income and/or low income family groups. The bonafide indigent group are very well taken care of by the method well-known to the members of the Society, i.e., funds provided by the County Board of Supervisors by which medical service, with free choice of physician, and drugs are furnished, on a no-cost basis to the individual. When hospitalization is considered necessary by the attending physician, it is furnished by admission to the Cochise County Hospital, again on a no-cost basis. The Committee considers these services very adequate, and on the whole, quite satisfactory to all concerned; and that it is much superior to arrangements in many other communities. The second group poses a much more difficult question. The problem facing organized medicine is pressure to place this group under some system of governmental care. Such a solution would definitely be a big step along the way to Socialized Medicine. The Committee does not think that the local problem with the oldster is too great at this time, but it may become so in the future. "Powers-that-be" have, after laboring long, proclaimed their desires. Further, the Committee sayeth naught.

The National Committee on Aging of the National Social Welfare Assembly, in a News Brief, commented that chronically ill and elderly individuals, where facilities in a general hospital exist, they should be treated in a general hospital. This opinion is supported by the St. Louis Jewish Hospital. The other view point is that of the Highland Hospital which contends that care for the chronically ill should be in a structure of specialized architecture. The argument for this is that the Highland Hospital has a capacity of 754 beds; 422 in the main building require constant medical and surgical care; 116 in its specially constructed building require only skilled nursing care and 216 beds of ambulant or semiambulant patients require unskilled nursing care. The cost for its skilled care is $13.00 per diem; and for the unskilled $11.50, showing that money is wasted in trying to house the chronically ill in the general hospital set up.

The new American Hospital Association program for the care of the chronically ill and aged suggests that the resources of the hospital should be made available to patients in nursing homes throughout the hospital's laboratory, radiological and other direct services, and through consultative services provided to patients for staff of nursing homes, by physicians, nursing, dietary, pharmacy, physical therapy, social services and others. Such suggestion has been forwarded to hospital superintendents with the recommendation that they spear-head such activity and endeavor to organize their staffs to volunteer such services for various nursing homes to go around and teach and instruct nursing home staffs.

There is now insurance for persons over 65 which includes nursing care. Surgical, medical and nursing home care insurance, for persons 65 and over, will be offered May 1st by the Wisconsin Physicians Service. The monthly premium for this plan will be $9.00 per person. Physicians' services will be according to a fee schedule. The two thousand physicians who participate in the WPS will accept benefits paid by the plan as full payment when the policy holders annual income is under $2,000.00 for a single person, or $3,600.00 for a couple.

The National Leadership Training Institute for the White House Conference on Aging, was held at the University of Michigan, June 24-26, 1959. Plans for the White House Conference were formulated at this meeting and representatives of the state associations urged to attend.

The Joint Council to Improve the Health Care of the Aged held its First National Conference in Washington, D. C. with headquarters at the Sheraton-Park Hotel, June 12 and 13, 1959. State Association representatives were urged to participate. The purpose of this conference was to formulate plans for the establishment of Joint Council on the state level.

In accordance with a publication of the Health Information Foundation released in April, 1959, it is interesting to note that the source of payment of doctors bills for persons aged 65 and over in the United States in 1957 included: from the ageds personal income 58 per cent; from savings 19 per cent; from other sources 2 per cent; from their children or other relative 12 per cent; from someone else 3 per cent; and indeterminate 6 per cent.

The AMA Council on Medical Service in April of 1959 suggests: "It is the responsibility of each physician to institute a periodic health appraisal program with individuals over 65, so as to develop a positive health maintenance and improvement program. The term "health appraisal" is really the old term "physical examination" with broader implications, including such items as mental and emotional evaluation, nutritional history, history of physical exercise and recreation, history of radiation exposure, sensitivity and allergy and a social psychosomatic section for a parallel to the present illness.

John L. Liecty, Treasurer, Arizona Public Service Company, was recently appointed and has accepted the chairmanship of the Phoenix Community Council's Committee on Aging. At the last meeting of the Committee a bill was drafted providing for the establishment of a state committee on aging. This bill was not introduced as several Representatives (State of Arizona) had previously introduced House Joint Resolution No. 2. No bill was enacted and unless action is taken by the Governor or the Legislature, Arizona will probably be the only state in the Nation that is not represented at the White House Conference on Aging in 1961.

The AMA Council on Medical Service held a one-day session on new concepts in aging which was held in Atlantic City during the AMA convention, June 8 to 12, for the purpose of presenting to the practicing physician a concentrated review of the current thinking regarding the health care of the aged and to provide him with concrete health recommendations which he can translate to his own older patients.

The AMA House of Delegates in December last unanimously approved a resolution urging the constituent and component societies, as well as physicians everywhere, to expedite the development of an effective voluntary health insurance or prepayment plan for the group over 65. The state associations of West Virginia, New

Jersey, California, Texas, Ohio, Florida, Michigan and Iowa report they have accomplished the plan. Among the many private hospital, medical and surgical insurance policies available to persons over 65, the following are important examples: "Guaranteed renewable contracts" issued by the Metropolitan Life Insurance Company, The New York Life Insurance Company and the Prudential Life Insurance Company; the "paid up at 65" policies issued by the John Hancock Insurance Company; and the "65 plus" policies issued by the Continental Casualty Company, the Mutual Benefit Health and Accident Association of Omaha and the American Association of Retired Persons.

Doctor Hamer reported on the Salt Lake City Regional Conference on Aging which he attended for the Association at the request of the Board of Directors. He suggested that the Committee, in its recommendations to the Board of Directors of the Association, come out with a strong recommendation that it continue taking part and positive action towards the creation and development of this thing on a county and statewide level.

It was moved, seconded and unanimously carried that the Board of Directors of the Association be urged to act upon the recommendations of this Committee made eight months ago in regard to the establishment of a state "Committee on Aging and the Aged," by the Governor of the State; that the Association take such steps within its power to promote the interest and realization of voluntary health insurance for the elderly, as suggested by the Cochise County Medical Society's Committee on Aging and the AMA, through Blue Cross-Blue Shield and private insurance carriers; that the state Association and county Societies again be apprised of the importance and far-reaching significance of the undertaking of activities in the field of aging at the local and state levels; that the Board of Directors expedite stimulation of interest in the individual and his family in a program for retirement, through legislative means, newspapers, etc., in a public relations program; that the Association give all reasonable co-operation to the national program of meetings, etc., towards accomplishing the expressed aim of this movement, reserving our own final commitment to conform to the best interests of the aged in this state; and that the Board of Directors consider selecting and sending representatives from the Association to either or both of the meetings pending, referable to the problem.

CANCER

The Arizona Division of the American Cancer Society submitted its report on the 1959 Cancer Seminar held at Paradise Inn, Phoenix, and projected plans for its 1960 meeting. The importance of having the event co-sponsored by the Arizona Medical Association was discussed at its meeting held March 21, 1959. It was directed that Doctor Leonard request the Professional Committee of this Association to ask the Board of Directors to allow the Association to be listed as an associate sponsor of the seminar in order to assure it that the proper Category 1 credit be given to it by the Academy of General Practice.

It was directed that before taking action it be determined what financial obligation the Association assumes should it become co-sponsor of the Cancer Seminar; and that the necessity for state Association approval of this program to assure credit by the Academy of General Practice be also ascertained.

It was moved, seconded and unanimously carried that the entire matter be tabled awaiting further information.

CRIPPLED CHILDREN

As previously directed, it was reported that the various specialty groups had been communicated with seeking designation of one or more of their number who might serve as contact representative (s). A roster will be prepared and circulated among the Committee membership.

In the matter of survey of crippled children's facilities in the State of Arizona, Doctor Fife reported that out of twenty organizations in this state contacted, eleven had responded, rather a representative group. Charting of the replies has not been completed as yet; however, it is observed that the governing boards of the agencies reporting are varied; most have medical representation; few can specifically state how many patients they have treated, helped or advised; primarily their efforts have been toward public education through publicity and national research; duplication of effort appears indicated in the fields of treatment and evaluation; better use of available clinical facilities and need for improvement in liaison with social workers, as pertains to family evaluation, teaching and training were among recommendations received.

It was suggested that there be explored the possibility of preparing some type of brochure by the Association outlining functions of the various groups, activities of each and means of contact; also, development of some sort of an interservice committee where information could be correlated and made available to all organizations having interest, whereby data could be obtained concerning each child, especially as to treatment and evaluation previously undertaken, thereby eliminating duplication. This latter project it is recognized would entail expense for the establishment of some type of central organization adequately staffed which might even include sponsorship of some type of team evaluation of these crippled children.

Doctor Schwartzmann expressed the opinion that the Community Councils throughout the State should be contacted requesting the names of all groups, organizations, etc., interested in the problem of handicapped children; organize these into rehabilitation, information and educational groups; and then determine facilities available throughout the State. To accomplish this, the possibility of sending teams to contact personally the Community Councils in regional areas to gather such information as may be determined upon was discussed.

Doctor Fife was directed to lay out a schedule of procedure for contact of localized Community Councils or Chambers of Commerce, assigning members of the Committee to make such contacts to determine the number and name of organizations involved in any facet of handicapped care, their method of operations and facilities available to them, to be assimilated in graph form for study and recommendation to the Board of Directors. In the matter of "Rehabilitation", Doctor Fife reported that the program is pretty wide-spread over all of the departments of health and it is evident that in this survey age we are living in, we are going to have to grin and bear the necessity of further surveys, committees and investigations of the rehabilitation situation as it exists here in Arizona and improve our set up. One thing in our favor is that Arizona is a young state and has a big industrial future ahead of it. We should be able to get a great deal of co-operation and be able to start from scratch and pretty well control our rehabilitation facilities all the way down the line as they develop.

In a letter dated February 27, 1959, received from F. J. L. Blasingame, M.D., Executive Vice President of the American Medical Association, it is pointed out that medicine faces an urgent problem today in attempting to restore increasing numbers of disabled and handicapped citizens to useful lives. The medical profession is urged to accept its responsibilities in the field of rehabilitation by initiating leadership at the state and community levels. The first step in medicine's "back to work" rehabilitation plan calls for state and county medical societies to set up committees on rehabilitation. The second step suggests that county medical societies survey existing rehabilitation facilities and report to the state society so that a complete picture of rehabilitation facilities in the state can be compiled.

Doctor Schwartzmann stated that there is no question but that we should set up a state Rehabilitation Committee. This committee should have close and extensive overlap with others such as the care of aging, crippled children, industrial relations, etc., so that all of these will be in on the ground floor with regards to development of a state-wide program. We will need a survey of facilities in order to give them information. We also should encourage the development of institutions with regard to rehabilitation. Some existing institutions are adding an all-phase treatment program, including rehabilitation. We should encourage rest homes, hospitals and all new units in the health field to include rehabilitation facilities. We should do everything necessary to prevent another charity or public subscription fund being raised to set up another rehabilitation center. There are individuals in Arizona who would be interested in developing such centers if they could be assured that it would be a going concern and not destined to failure. With the aid of industry, if they can be shown how rehabilitation will save them money, absenteeism, etc., facilities can be developed and utilized by the Polio Foundation, the Arthritic Foundation, the Brain Injured, and all of the other societies could take part in such a center (s) on a pay for service basis to the point where it would be a going concern.

It was moved, seconded and unanimously caried that we recommend to the Board of Directors that a Committee on Rehabilitation be established in the state Association, in the light of information we have received from the American Medical Association and other sources as to need therefor; that in view of the fact that such activity is definitely going to be beneficial to the State in the future, we should get such a Committee organized and established as soon as possible; that it should include adequate over-lap with regards to other committees which most certainly will be involved, such as the Committee on Aging, the Industrial Relations Committee, possibly the Insurance and Hospital Committees, the Committee on Tuberculosis, etc., all of which will be involved in rehabilitation problems; and that the Professional Committee proceed to investigate existing facilities in Arizona for the care of the handicapped to be passed along and utilized by the Committee on Rehabilitation.

GENERAL MEDICINE

No report.

HARD OF HEARING

No report.

HOSPITAL AND NURSING PROBLEMS

The Tucson Chapter of The American National Red Cross, by letter dated April 1, 1959, advised that agreement has been made between the United States Public Health Service, Arizona Nursing Home Association, and the American National Red Cross to use authorized Red Cross nursing instructors to assist in training employed nursing aids for the nursing homes. A meeting was arranged to be held April 6, 1959, at the Maricopa Chapter House in Phoenix, to plan the program within the state for the best utilization of all community facilities.

The Communications Division of the American Medical Association, by letter dated March 27, 1959, reported that the medical profession will have an unusual opportunity to present a united front to the American people by helping the American Hospital Association promote its annual observance of National Hospital Week, May 10 through 16, 1959. The Week is designed to develop greater understanding and appreciation of the services and contributions of the nation's hospitals, and the theme this year is "More Roads to Recovery."

Doctor Ross reported on legislation involving nursing home regulations which failed of enactment; a recent article appearing in LOOK magazine; correspondence with the Industrial Commission regarding workman's compensation and removal of the workman from the rights of privilege by "waiver"; and a remarkable letter from Doctor Ian M. Chesser, Chairman of the Medicolegal Committee, relative to the status of patient hospital records, especially as to the portions considered "privileged" and "not privileged" which is recommended for publication in the *Arizona Medicine Journal.*

MATERNAL AND CHILD HEALTH

Doctor Semoff stated that most of his remarks were included in his report dealing with The National Foundation Conference in San Francisco previously rendered; however, he wished to advise that the Health Insurance Association of America through news releases is supporting the polio immunization program encouraging the people to obtain vaccine inoculations.

MENTAL DISEASES

No report.

SEMINARS

No report.

TUBERCULOSIS

No report.

Dr. Salsbury: Our State Tuberculosis Sanitorium has been running at over capacity for the last several months. For the first time in six years we've got a waiting list. Recently, the Highway Commission, which sets the minimum wage for certain categories for a couple of years in advance, established a wage rate of $1.25 per hour. This means that a certain number of personnel in the Sanitorium will be influenced by that and we will have to reduce our bed capacity from the present 85 to 69 on the first of July, so that those patients which normally would be taken care of in the Sanitorium, a certain percentage of them will be sent back to the counties for care. That's because sufficient money was not appropriated by the Legislature to take up the slack at this time. There will be a release on that some time this week. This is passed along for a matter of information.

I'd also like to mention briefly, it's just off the press this last week and will be coming to each of you, a Physician's Handbook on Public Health, which we hope will answer a lot of questions people raise from time to time and which we think you will enjoy having.

Lorel A. Stapley, M.D.
Secretary
by

Robert Carpenter
Executive Secretary

SILVER ANNIVERSARY MEETING

THE 25TH Annual Meeting of the American College of Chest Physicians was held at the Ambassador Hotel, Atlantic City, June 3-7, 1959. More than 1800 physicians and guests attended the meeting. Fellowship certifictes were presented to 210 physicians at the Convocation on Thursday, June 4. Honorary Fellowships were awarded to Dr. Harold S. Diehl, New York City, and to Mr. Murray Kornfeld, Founder and Executive Director of the College. Masterships were conferred upon 11 past-presidents of the College.

The 1959 College Medal was awarded on June 6 to Mr. Murray Kornfeld for having founded the American College of Chest Physicians and for having developed the College into a worldwide medical society — for having founded and developed the journal, DISEASES OF THE CHEST, and for having devoted 32 years of his life as a leader in furthering the specialty of diseases of the chest. This was the first time the College Medal had been awarded to a lay person.

The following officers of the American College of Chest Physicians were elected for the year 1959-1960:

President, Seymour M. Farber, San Francisco, California; President-Elect, M. Jay Flipse, Miami, Florida; First Vice-President, Hollis E. Johnson, Nashville, Tennessee; Second Vice-President, John F. Briggs, St. Paul, Minnesota; Treasurer, Charles K. Petter, Waukegan, Illinois; Assistant Treasurer, Albert H. Andrews, Chicago, Illinois; Chairman, Board of Regents, Arthur M. Olsen, Rochester, Minnesota; Vice-Chairman, Board of Regents, Irving Willner, Newark, New Jersey; Historian, Carl C. Aven, Atlanta, Georgia.

Dr. Howell S. Randolph, Phoenix, was reelected Chairman of the Board of Governors of the College. Dr. Millard Jeffrey, Phoenix, received his certificate of Fellowship at the Convocation on June 4.

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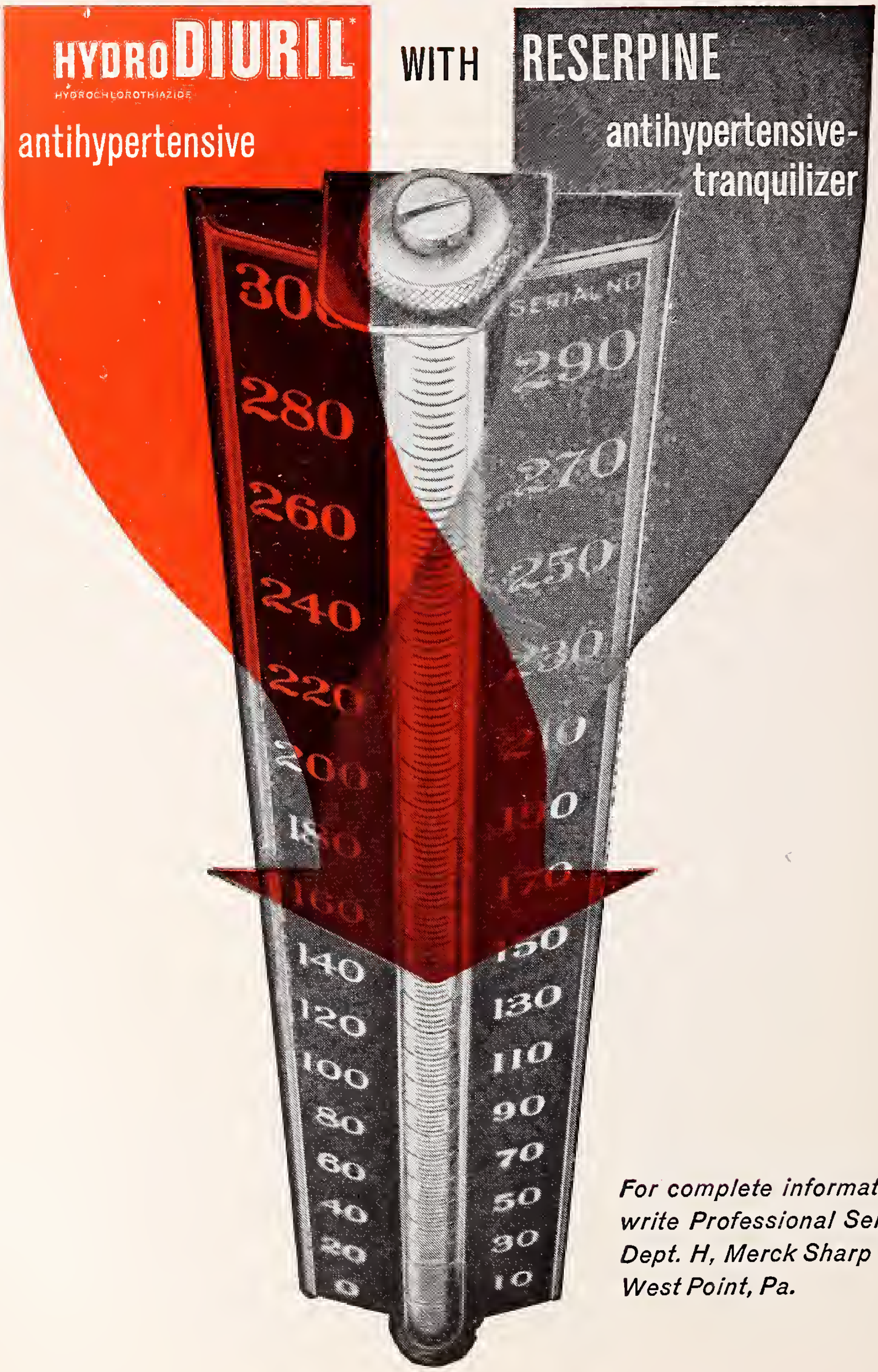

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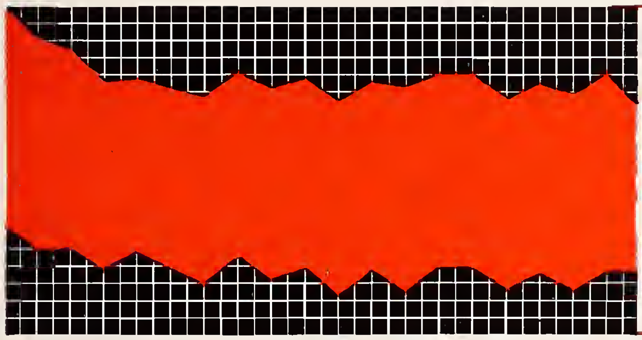

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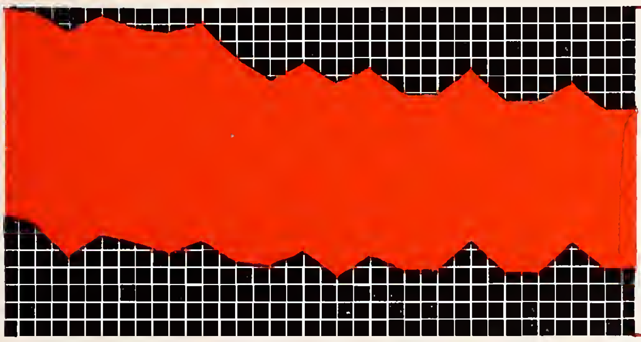

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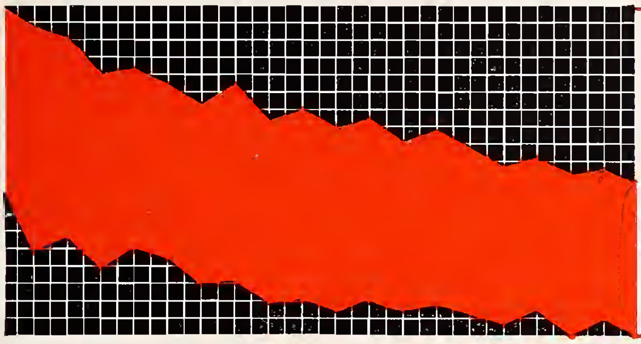

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Office of the Surgeon General, U. S. Army
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MANAGEMENT OF SUSPECTEED AND/OR PROVEN MALIGNANCY

REFERENCE is made to:

a. Paragraph 3b, ODMC Letter No. 6-59, dated 9 April 1959

b. Paragraph 8a(2) (a)², ODMS Letter No. 16-58, dated 29 Aug. 58

c. Paragraph 2, ODMC Letter No. 3, dated 4 February 1957

2. Since the necessity for restricting the Medicare Program, effective 1 October 1958, increasing numbers of cases involving suspected and/or proven malignancy (especially of the breast and cervix) have been brought to the attention of this office. Many of these cases are identified as requiring urgent attention with notations that surgery cannot be planned and that postponement is not advisable or consistent with sound medical practice. These patients frequently are afflicted with a disease process which is not readily visible and often does not produce subjective complaints characteristically associated with other more readily identifiable acute medical or acute surgical conditions.

3. It is the position of this office that the patient with suspected and/or proven malignancy is an acutely ill patient and qualifies for care under the Program. Many of these patients require immediate hospitalization despite the absence of readily identifiable signs and symptoms. When, in the opinion of the cognizant medical authority, treatment is urgently required, and performed in a hospital without delay, immediately upon discovery of the condition, such care should not be considered plannable. These cases will be considered payable at Government expense when certified by the charge physician in accordance with ODMC Letter No. 6-59, and provided the care is otherwise authorized (i.e., Medicare Permit when required). Such qualifications of urgency cannot be based, for payment at Government expense, on mental anguish, emotional attitudes, or socio-economic factors involving the patient and/or sponsor, but will be based solely on the medical requirement for immediate hospitalization.

4. *BIOPSIES*

a. *Not Authorized for Payment* — It is emphasized that biopsies performed on an outpatient basis and those services usually considered outpatient care are not payable at Government expense.

b. *Authorized for Payment* — Biopsies performed on patients formally admitted to the hospital are payable provided the charge physician indicates the need for hospitalization and states that the biopsy was required to properly manage the suspected, or proven, malignancy which, in his opinion, constituted an acute condition as stipulated in paragraph 3, above. In those instances where a *Medicare Permit* is required for the original admission, an additional Permit will not be required for a subsequent re-admission for surgery based upon a positive biopsy report.

c. *Negative Pathological Reports* — In some instances, the biopsy report will be "negative." Such care related to the negative biopsy is likewise authorized at Government expense. Subsequent definitive surgery in such instances directed toward these benign conditions is not payable at Government expense.

5. *X-ray Therapy of Suspected and/or Proven Malignancies* — Under certain circumstances the patient, in the opinion of the charge physician, should receive x-ray, radium, or radioisotope therapy rather than surgery. In these instances, it will be necessary that the patient meet the requirements established in paragraph 3, above, and that the x-ray, radium or radioisotope therapy be *prescribed* or *initiated* during a period of hospitalization for authorized care. In this regard, attention is invited to paragraph 2, ODMC Letter No. 3, dated 4 February 1957, which permits use of radiation therapy on an outpatient basis when such care is prescribed or initiated during an authorized period of hospitalization.

6. It is not the intent or purpose of this letter to encourage or infer that payment at Government expense will be authorized for care of warts, nevi, moles, hemangiomata, talangiectatic lesions, keloids, verrucae, condylomata, molluscum, scars, or other similarly recognized conditions when such care is for cosmetie reasons. To be authorized for payment, the claim must be supported by clinical evidence of malignancy and care must have required hospitalization.

7. Fiscal administrators are requested to publish and disseminate the contents of this letter at the earliest opportunity.

FLOYD L. WERGELAND
Brigadier General, MC

Executive Director
Official For Use of Contractors
Dependents' Medical Care Program
WALKER W. EVANS

Lt Colonel, MSC
Contracting Officer
Office for Dependents' Medical Care

H.I.F. REPORTS NEW GAINS IN HEALTH-INSURANCE COVERAGE

THE PROPORTION of American families covered by voluntary health insurance is still increasing. Recent gains in enrollment have been most rapid among a group once considered "uninsurable" — persons 65 or older.

In its monthly statistical bulletin, *Progress in Health Services,* the Foundation said that 69 per cent of all U.S. families now have at least one member protected by some form of health insurance — an increase of almost 10 per cent since 1953 in the proportion of families covered.

The Foundation published preliminary results of a survey made in co-operation with the National Opinion Research Center of the University of Chicago. A representative cross-section of American families were interviewed at length in 1958 about such questions as what types of medical services they obtain, how they pay for medical care, and what kinds of health insurance they carry.

A full report on the survey is now being prepared. The Foundation bulletin compared highlights of the latest study with a similar one conducted in 1953.

Although coverage under voluntary health insurance increased for all age groups from 1953 to 1958, the Foundation said that the rise was especially notable for persons at the older ages. There was an increase of almost 40 per cent in the proportion of persons 65 or older with health insurance.

According to George Bugbee, Foundation President, recent experience with insuring the aged "offers encouraging proof that at least one group once considered 'uninsurable' can be reached in sizable numbers."

Mr. Bugbee also pointed out that the fastest growing types of voluntary health insurance today provide protection against a broader range of expenses than was common a few years ago.

During the five-year survey period, the proportion of individuals with hospitalization insurance increased from 57 to 65 per cent of the total population, and the proportion with medical-surgical coverage rose from 48 to 61 per cent. Much greater increases were shown during the same period for insurance plans covering not only in-hospital costs but also physicians' fees, drugs, and other out-of-hospital expenses for those few families that incur unusually heavy medical costs.

Despite such increases in coverage, Mr. Bugbee stated, "a still greater proportion of the population could be insured. Current estimates indicate that in five of our most densely populated states — Connecticut, Ohio, New York, Pennsylvania, and Illinois — 85 per cent or more of the population is enrolled under some voluntary plan. Current efforts should be aimed at raising the national figure to somewhere near this proportion."

ONLY TWO MORE E.C.F.M.G. EXAMINATIONS BEFORE JULY 1, 1960

THE SPONSORING agencies of the Educational Council for Foreign Medical Graduates, in a leaflet published June 1, 1958, stated "It is expected that all graduates of foreign medical schools, serving as interns or residents in U. S. Hospitals as of July 1, 1960, will have been certified by E.C.F.M.G. The American Hospital Association will take this into consideration when approving hospitals for listing."

At the time this target date for compliance with the E.C.F.M.G. certification plan was established, there were four opportunities for certification still available before July 1, 1960. As of June 1, 1959, there will be only two opportunities for certification still available, one on March 16, 1960 and the other on September 21, 1960.

To take the American Medical Qualification Examination on September 22, 1959, the application, credentials for evaluation, and appointment request form must be in the hands of the E.C.F.M.G. by June 22, 1959.

To take the Examination March 16, 1960, the application, credentials and appointment request form must be filed on or before December 16, 1959.

BOARD OF MEDICAL EXAMINERS STATE OF ARIZONA

826 Security Building
Phoenix, Arizona

THE BOARD of Medical Examiners of the State of Arizona at a regular meeting held Saturday, April 18, 1959, issued certificates to practice medicine and surgery in this state to the following doctors of medicine:

Axelrod, Sidney (S)	V.A. Hospital, Tucson, Arizona
Baker, Gordon P. (Pd)	Children's Hospital of the East Bar, Oakland 2, California
Beddoes, Morris G. (Anes)	245 Alta Vista Ave., Waterloo, Iowa
Bell, Lewis B. (GS)	3650 Clairemont Dr., San Diego 17, California
Caskey, John H. (GP)	2725 E. Lakin Dr., Flagstaff, Arizona
Coleman, Hugh V. (GS)	U.S. Army Hospital, Fort Huachuca, Arizona
Derrick, John R. (C-Pd S)	Medical Branch University of Texas, Galveston, Texas
Detjen, Edward D. (GP)	Bigfork, Minnesota
Emery, George del (R)	V.A. Center, Whipple, Arizona
Giangobbe, James P. (GP)	1213 E. Glendale Ave., Phoenix, Arizona
Glueck, Sidney J. (Oph)	34 W. High, Springfield, Ohio
Gonzalez, Humberto C. (GS)	V.A. Hospital, Phoenix, Arizona
Hastings, Jr., Robert E. (GS)	1313 E. Ann St., Ann Arbor, Michigan
Hendricks, Esten (GP)	Verndale, Minnesota
Hirota, Masaaki (Path)	1033 E. McDowell Rd., Phoenix, Arizona
Kartchner, Max J. (ObG)	180 S. Zuni, Denver 23, Colorado
Keyes, Jr., Harmon E. (GP)	San Manuel Copper Corp. Hospital, San Manuel, Arizona
Kilgore, Jr., James M. (P)	461 W. Catalina Dr., Phoenix, Arizona
McWilliams, Jr., Thomas P. (I)	461 W. Catalina Dr., Phoenix, Arizona
Marshall, Kathryn J. A. (GP)	65 W. Culver, Phoenix, Arizona
Mertz, George H. (GS)	808 W. Marshall, Phoenix, Arizona
Mortland, Stewart R. (GP-S)	Craycroft Medical Center, Tucson, Arizona
Nagel, Donald A. (GP)	PHS Indian Hospital, Tucson, Arizona
Oliver, III, Robert J. (GM)	1002 N. Country Club Rd., Tucson, Arizona
Pinkerton, Donald C. (G)	Sage Memorial Hospital, Ganado, Arizona
Pirruccello, Frank W. (Pl-ReS)	636 Church Street, Evanston, Illinois
Robison, A. Edgar (Anes)	43 S. Fifth East, Sale Lake City, Utah
Shellenberger, Lewis C. (PH)	American Red Cross, Tucson, Arizona
Sigman, Craig R. (GP)	113 W. 2nd St., Casa Grande, Arizona
Sindell, Harlan W. (Pd)	Wm. Beaumont Army Hospital, El Paso, Texas
Spencer, Steven S. (GP)	PHS Indian Hospital, Fort Defiance, Arizona
Sproule, Ralph P. (OALR)	1024 - E. State St., Milwaukee 2, Wisconsin
Urie, Murray G. (P)	759 Turnpike, Pompton Plains, New Jersey
Wagoner, James M. (GP)	Harmony, Minnesota
Westman, Lincoln H. (I)	Professional Building, Phoenix, Arizona
Wizbowski, Raymond V. (GS)	22000 Madison, Dearborn 8, Michigan

LOCATION INQUIRIES RECEIVED

BIGELOW, RICHARD P., M.D., 359 B Grant Road, Ft. Devens, Mass; *GP*; 1954 graduate of Cornell University Medical College; two years rotating internship at Strong Memorial Hospital in Rochester, N.Y.; served residency at Salt Lake County General Hospital; holds licenses in states of California and Massachusetts; will be released from military service July 5, 1959; interested in group or associate practice; age 30; married; available after July 5, 1959.

BRUNEMEIER, FAYLON M., M.D., 836 E. 56th St., Chicago 37, Ill.; *OPH*; 1955 graduate of the University of Chicago; interned at University of Minnesota Hospitals in Minneapolis; served residency at University of Chicago Clinics; holds license in the state of California; fulfilled military obligations; interested in associate or group practice; age 34; married; available Sept. 1, 1959.

CLAPP, PAUL, M.D., Dothan Road, White River Junction, Vt.; *GS*; 1952 graduate of Harvard University; surgical internship at New York Hospital; served residency at New York Hospital and Dartmouth Affiliate Hospitals in Hanover, N. H.; fulfilled military obligations; interested in clinic, assistant or associate practice; age 36; married; available Feb. 1, 1960.

CROZIER, WALLACE ALLEN, M.D., 5219 Halsey, Shawnee, Kan.; *PD*; 1955 graduate of the University of Colorado; interned at Kansas City General No. 1; served residency at Children's Mercy Hospital in Kansas City, Mo.; holds license in state of Colorado; fulfilled military obligations; interested in clinic practice — would consider assistant, associate or institutional practice; age 30; married; available July, 1960.

ELSON, MATTHEW WILLIAM, M.D., Ohio State Medical Center, 11th and Neil Avenue, Columbus 10, Ohio; *R*; 1949 graduate of Ohio State College of Medicine; interned at Minneapolis General Hospital; served residency at Ohio State Medical Center in Columbus; holds licenses in states of Ohio and Washington; fulfilled military obligations; interested in group or associate practice or Chief of department of radiology in 180-200 bed hospital; age 34; married; available July 1, 1959.

HARRINGTON, LOUIS E., M.D., Danbury, Iowa; *GP*; 1949 graduate of Wayne University College of Medicine; interned and served residency at Fitzsimons Army Hospital in Denver; holds licenses in states of Colorado, Iowa and Wisconsin; fulfilled military obligations; interested in solo, small group or associate practice; age 38; married; available approximately August, 1959.

HERBERT, JOSEPH W., M.D., 19 Valley Road, Beloit, Wis.; *OB-GYN*; 1945 graduate of Southwestern Medical School; interned and served residency at Jefferson Davis Hospital in Houston; holds licenses in states of Texas, Wisconsin and Louisiana; fulfilled military obligations; interested in group practice associated with obstetrician or possibly associate practice; age 39; married; available — few months after notice.

KANTOR, STEPHEN, M.D., 719 N. 5th Avenue, Maywood, Ill.; *S*; 1953 graduate of University of Southern California; interned at V.A. Hospital in Los Angeles; served residency at Cedars of Lebanon in Los Angeles and V.A. Hospital in Hines, Ill.; holds licenses in states of California and Illinois; fulfilled military obligations; interested in group, industrial or associate practice; age 34; married; available August or September, 1959.

KREGZDE, JOHN, M.D., 2859 Francis Avenue, Los Angeles 5, Calif.; *GP* or *I*; 1948 graduate of J. W. Goethe University in Frankfurt, Germany; interned at Knickerbocker Hospital; served residency at Jewish Chronic Disease Hospital in Brooklyn; holds licenses in states of California and New York; military status 1-A; interested in group, industrial, associate or institutional practice; (also interested in research practice); age 39; married; available October, 1959.

LINKNER, LAURENCE M., M.D., 5337 Buckner Avenue, Louisville 14, Ky; *GS*; 1953 graduate of State University of New York College of Medicine; interned at Detroit Receiving Hospital; served residency at Harper Hospital in Detroit; holds license in the state of Michigan; fulfilled military obligations; interested in group, associate or partnership practice; age 34; married; available September, 1959.

LYON, JR., WILBUR, H., M.D., 400 Via Hidalgo, San Rafael, Calif.; *GS*; 1951 graduate of Harvard Medical School; six and one-half years in surgical internship and residences at Roosevelt Hospital in New York City and the Boston V.A. Hospital; holds licenses in the states of Massachusetts and California; diplomate of the National Board of Medical Examiners; fulfilled military obligations; interested in group, industrial or associate practice in good location with need for surgeon; age 35; married; available—any time.

MATHEWSON, RUSSELL C., M.D., Route No. 5, Benton Road, Muncie, Ind.; *P*; 1944 graduate of Marquette University School of Medicine; interned at Milwaukee County General Hospital; reserved residency at Bedford VA Hospital, West Roxbury VA Hospital and Cushing General Hospital — all in the state of Massachusetts; holds licenses in states of Wisconsin, Louisiana, Mississippi and Indiana; fulfilled military obligations; interested in solo, small group or associate practice; age 49; married; available three months after notice.

PAPPAS, JR., PETER, M.D., 513 N. Louise St., Atlanta, Texas; *GP*; 1954 graduate of the University of Texas; interned at William Beaumont Hospital in El Paso; served residency at Huey P. Long Charity Hospital in Pineville, La.; holds licenses in states of Texas and Louisiana; fulfilled military obligations; interested in group, industrial or associate practice; age 35; married; available July 1, 1959.

PAYNE, JR., FRED W., M.D., 151 Crittenden Blvd., Rochester, N.Y.; *GS*; 1953 graduate of Vanderbilt Medical School; interned and served residency at Strong Memorial Hospital in Rochester, N. Y.; holds licenses in states of Tennessee and New York; fulfilled military obligations; interested in group or associate practice; age 32; married; available Feb. 1, 1960.

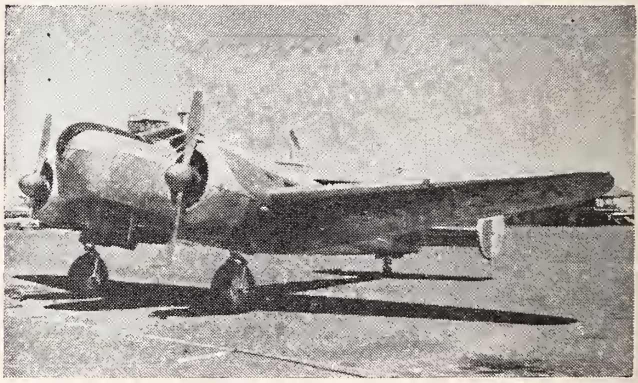
PRODELL, JR., JOHN H., M.D., 115 South Mall, Willow Lawn, Richmond 30, Va.; *I*; 1947 graduate of Harvard Medical School; interned at U.S. Public Health Service Hospital in Staten Island, N. Y.; served residency at V.A. Hospital in Richmond, Va.; holds licenses in states of Virginia, North Carolina and New York; fulfilled military obligations; interested in group, industrial, associate, institutional practice or student health; age 38; married; available July 1, 1959.

WHITECLOUD, THOMAS S., M.D., 858 Market St., Pascagoula, Miss; *GP-S*; 1943 graduate of Tulane Medical School; interned at U.S. Marine Hospital in San Francisco; residency — none; holds licenses in states of Texas, Louisiana, Mississippi and Alabama; interested in student health and teaching; age 45; married; available — depending on situation.

SANDERSON, WILLIS, M.D., Parkland Memorial Hospital, 5201 Harry Hines Blvd., Dallas 35, Texas; *ANES*; 1952 graduate of Cornell Medical School; interned at White Cross Hospital in Columbus, Ohio; presently serving residency at Parkland Memorial Hospital in Dallas, Texas; holds licenses in states of West Virginia and Alabama — applied for license in state of Arizona; fulfilled military obligations; will conisder institutional practice; age 36; married; available August 1, 1960.

SCHADLER, JOHN ALLEN, M.D., PHS Indian Hospital, Talihina, Okla.; *GS*; 1953 graduate of the University of Cincinnati College of Medicine; interned and served residency at St. Mary's Hospital in Cincinnati; holds license in state of Ohio; fulfilled military obligations; interested in group or private practice; age 32; married; available June 1959.

ZAKI, RESHDY HABIB, M.D., 7741 Hasbrook Ave., Philadelphia 11, Pa.; S; 1946 graduate of Cairo University in Egypt; interned in Germantown, Pa.; served five years residency in England, two years in Egypt and seven months in Jeanes Hospital in Philadelphia; interested in clinic, industrial, assistant or associate practice—will consider institutional practice; age 36; married; available Sept., 1959.



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CAMP VERDE — Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Ariz.

EL MIRAGE — Population 2000 — and including the trading areas of Surprise, Youngtown, Peoria and Luke Air Force Base the population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving, with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available and in the area surrounding El Mirage from Glendale (9 miles) to the East, and Wickenburg (35 miles) to the West there are only two doctors to serve this community. The need for an M.D. and/or surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Ariz.

GILA BEND — Population 2,500 — 80 miles west of Phoenix — Nearest town to the Painted Rock Dam Project — Good opportunity for GP. Cattle, cotton, and general farming. Office and equipment available. $150 monthly income from Board of Supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

GLOBE — Population 10,000 and including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about one hour by car from either Tucson or Phoenix; No. E.N.T. man in the area, will consider GP. New medical center, hospital, all church denominations, schools, clubs, etc. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad St., Globe, Ariz., or Ellis L. Pollock, M.D., Miami Inspiration Hospital, Miami, Ariz.

HAYDEN — Population 3,000/4,000 — Industrial practice — approximately 200 employees and dependents. Only part-time required. Coverage; Metropolitan Surgical Plan. Physician may engage in private practice also. Small Company-owned Clinical Building (new) available for use, with X-ray equipment, diathermy equipment, etc. Full-time nurse available to assist; clerical work to be handled by company. Company housing facilities available for physician—small rental. Contact: American Smelting & Refining Company, Mr. Ben Roberts, Department Manager, P.O. Box 1111, El Paso, Texas.

MIAMI — Opportunity for GP — Industrial hospital staffed by approximately 7 doctors, who care for personnel and families of those who work for the 3 principal mining companies. Community served by mining and ranching interests. Contact Robert V. Horan, M.D., Miami Inspiration Hospital, Miami, Ariz.

MORENCI — Mining community near New Mexico - Arizona border. Population 10,000. Has vacancy at hospital for GP. Contact Carl H. Gans, M.D., Morenci Hospital, Morenci, Ariz.

PAGE — Population growing by leaps and bounds at the site of the new Glen Canyon Dam Project. Current estimates are 6,000 to 8,000 total. Only one M.D. is now located in Page and he has facility available. Located about 90 miles north of Flagstaff, Ariz., the building project is estimated to be concluded in 10 years. Write Ivan W. Kazan, M.D., 6th Avenue and S. Navajo, Page, Ariz., for full details.

PAYSON — Staff Doctor for small country Clinic Hospital. Located in the heart of one of the fastest growing residential, recreational areas in the State. One hundred miles northeast of Phoenix on fine paved scenic highway, this clinic, operational two years, has been forced to expand into a 12 bed hospital, with facilities for further expansion at an early date. Wonderful opportunity for large and rapidly growing private practice. Elevation of 5,000 feet. Fine year round climate, excellent for asthmatics. Surrounding country is forested and abounds in fish and game, with excellent facilities for camping, riding and hiking. For further information, contact Mrs. Edward Taylor, Section Payson Clinic Inc., Payson, Ariz.

SAFFORD — Graham County Health Department in need of an M.D. In the heart of the cattle and farming areas of southeastern Arizona. Population of 10,500—elevation is 2,920. Schools, churches and social facilities are numerous. Contact Mr. Verl Lines, Chairman, Graham County Board of Supervisors, Safford, or Frederick W. Knight, M.D., 618 Central Ave., Safford.

ST. JOHNS — Seriously need a doctor of medicine, preferably a GP, in this east-central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook.

TOLLESON – In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 9112 West Van Buren Street, Tolleson.

TUCSON – The V.A. Hospital is in urgent need of an Orthopedic Surgeon. They prefer someone who is Board certified, but would take someone who has had special training as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact S. Netzer, M.D., Director, Professional Service, V.A. Hospital, Tucson.

WINSLOW – Population over 7,500. Good opportunity for GP. Arrangements can be made to take over existing vacancy in practice. Facilities quite desirable and satisfactory terms can be arranged to suit any financial circumstance. Hospital privileges immediately available. County work also available at $500 per month plus lab and X-ray. For further details, contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz., or Mr. Paul Gear, County Supervisor, Court House, Holbrook.

FOR INFORMATION ON OPPORTUNITIES IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Ariz.

Carl H. Gans, M.D., Phelps Dodge Hospital, Morenci, Ariz.

Ira E. Harris, M.D., Miami Inspiration Hospital, Miami, Ariz.

Charles B. Huestis, M.D., Box 928, Hayden, Ariz.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Ariz.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Ariz.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Ariz.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Ariz.

Future Meetings

ARIZONA ACADEMY OF GENERAL PRACTICE

THE SEVENTH Annual Scientific Session of the Arizona Academy of General Practice will be held in Scottsdale at the Valley Ho Hotel, dates for the meeting are October 15, 16 and 17, 1959. At the present time, there will be an afternoon session on the 15th, a full day session on the 16th, and a half day session on the 17th. On the afternoon of the 17th, there will be the Annual Golf Tournament and the meeting will be ended with the President's Dinner-Dance.

Dr. Samuel Hale, who is the program chairman, has arranged for a fine group of speakers. They represent some of the leaders in medical education. To date the following men are definitely planning to speak:

J. Walter Wilson, M.D., Clinical Prof. of Dermatology, Univ. of Calif. at Los Angeles; Stewart Wolf, M.D., Professor of Medicine, Univ. of Okla. Medical Center; Robert Greenblatt, M.D., Professor of Endocrinology, Medical College of Georgia; John G. Young, M.D., Clinical Prof. of Pediatrics, University of Texas.

This list is to be supplemented and subject matter will be announced at a future date. As in the past, the meeting will carry Category 1 credit.

Also, in attendance will be a large group of Technical Exhibitors who will demonstrate their latest products. The Exhibitors Hall will be next door to the Assembly Room, and will be well stocked with coffee during the course of the meeting so that you can enjoy yourself while being detailed.

The Hotel Valley Ho has thrown its full facilities open for our Convention and I feel that will give us a fine three-day session.

Mark the dates now and plan to attend the Seventh Annual Scientific Session, October 15, 16, and 17, 1959.

AMERICAN CANCER SOCIETY ANNUAL MEETING

October 26 - 30, 1959

TENTATIVE SCHEDULE

Sunday, Oct. 25, 1959, 3:00 P.M. - 8:00 P.M. – Registration.

Monday, Oct. 26, 1959, 8:00 A.M. - 8:00 P.M. – Registration.

ANNUAL SCIENTIFIC SESSION: "SYMPOSIUM ON EVALUATION OF EARLY DIAGNOSIS OF CANCER"

9:00 - 10:45 A.M. — The Purpose of the Meeting; What is Early Cancer?; What is an Adequate "Cancer Check-up"?; The Changing Responsibility of the Practicing Physician.

10:45 A.M. - 12:00 — Panel: The Economics of Cancer Detection.

1:30 P.M. - 3:15 — The Value of Periodic Examinations in Detection of:

Early Cancer of Colon and Rectum
Early Cancer of Uterine Cervix
Early Head and Neck Cancer
Early Cancer of the Breast
Early Genitourinary Cancer
Early Cancer Upper G.I. Tract
Early Lung Cancer

3:15 P.M. — Panel: Does Periodic Examination of Well Persons Increase Longevity?

Tuesday, Oct. 27, 1959, 8:00 A.M. - 8:00 P.M., Registration.

9:00 A.M. — Scientific Session Continued:

9:00 A.M. — The Problem of the Precancerous Lesion.

9:30 A.M. — The Problem of the 7 Danger Signals.

10:00 A.M. - 12:00 — Precancerous Lesions and How to Treat Them:

Breast, Skin, Leukoplakia, Uterus, Stomach, Rectum, Thyroid, Moles.

1:30 P.M. to 2:00 P.M. — The Value of Staging and Proper Reporting.

2:00 P.M. to 4:30 P.M. — The Treatment of Early Cancer of:

Breast, Cervix, Skin, Oral Cavity, Larynx, Rectum, Thyroid.

Announcing the Fourteenth Annual Symposium on Fundamental Cancer Research, "Cell Physiology of Neoplasia," will be held Feb. 25, 26, 27, 1960 at the University of Texas M. D. Anderson Hospital and Tumor Institute.

Annual Course in Postgraduate Gastroenterology of the American College of Gastroenterology, The Biltmore, Los Angeles, Calif., 24, 25, 26 September 1959.

Formal credit for this course will be given for advancement in the American College of Gastroenterology. It is also acceptable for A.A.G.P. Category II credit.

Women's Auxiliary

CONVENTION REPORT

ONE HUNDRED and forty-eight women registered for the annual meeting of the Women's Auxiliary to the Arizona Medical Association which was held at the San Marcos Hotel in Chandler April 29 through May 1.

The General Session and election of officers was held on April 30, in conjunction with a luncheon at Maricopa Inn in Mesa. A highlight of this session was the "Report Parade," a fashion show of "reports" modeled by the State Chairman.

We were privileged to have as our honored guest for the convention Mrs. E. Arthur Underwood of Vancouver, Washington, our national president. Mrs. Underwood conducted the "School of Instruction" on May 1 at Mountain Shadows and installed the new officers at the luncheon which followed. One hundred and twenty-six members attended this luncheon, which concluded with a water show put on by Dick Smith's Swim Gym.

The hobbies of seven doctors and 12 doctors' wives were entered in the Hobby Show at the San Marcos. Trophies were awarded on the basis of popular vote to Dr. Andrew Gaudielle of Tucson for a painting, and to Mrs. William Bishop of Globe for a crocheted Afghan.

Winners of the ladies' Nine Hole Golf Tournament were: Mrs. Warren Sergent, low gross; Mrs. Shelby Mills, second low gross; Mrs. James Grobe, low net; Mrs. Robert Beers, second low net; Mrs. Everett Dean, low put.

Mrs. A. H. Tallakson,
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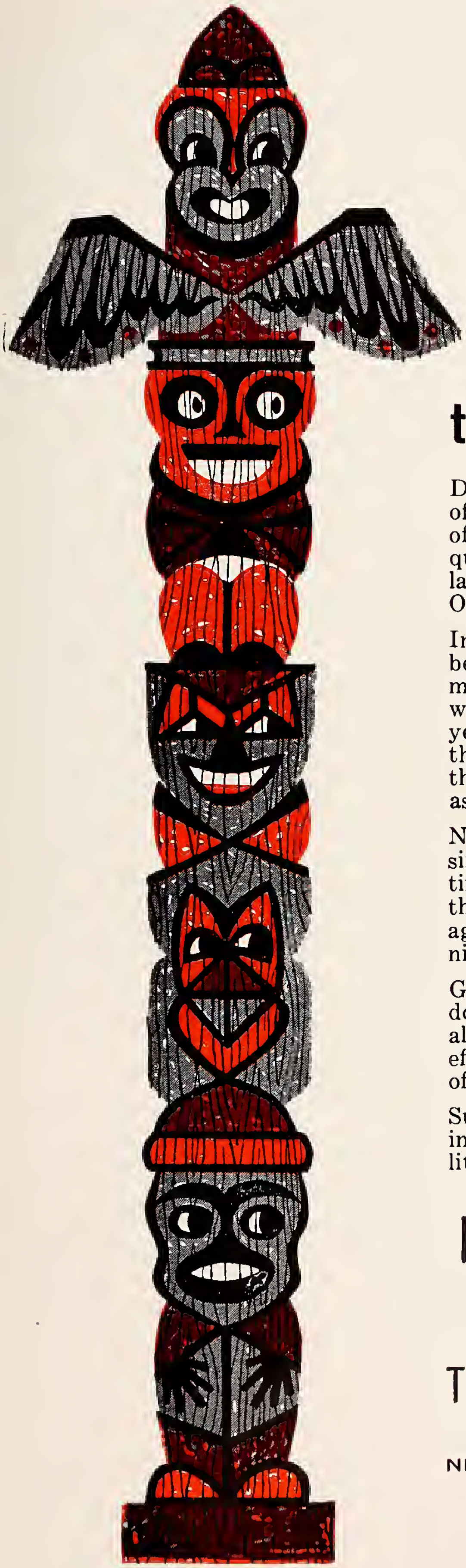

the disease of many masks

Doctor, do you recognize this patient? She complains of flatulence, constipation with alternating periods of diarrhea, and colicky pains in the lower right quadrant. At other times she is troubled by anorexia, lassitude, dull headache, muscle pains and backache. Or she may have only one or two of these symptoms.

In these puzzling cases, serious consideration should be given to intestinal amebiasis—the disease of many masks. Clinicians say it is "one of the most widespread and serious protozoan diseases of man," yet "there is no parasite more often misdiagnosed than is *E. histolytica*." Conservative estimates place the incidence at 10% of the United States population as a whole, and 16% in southern states.

Now Glarubin, a relatively non-toxic amebicide, simplifies the treatment of suspected cases of intestinal amebiasis. Glarubin, a crystalline glycoside from the fruit of *Simarouba glauca*, is a specific amebicidal agent with minimal side effects. It contains no arsenic, bismuth or iodine.

Glarubin is administered orally in tablet form and does not require strict medical supervision or hospitalization. Extensive clinical trials prove it highly effective in intestinal amebiasis, and virtually free of toxicity.

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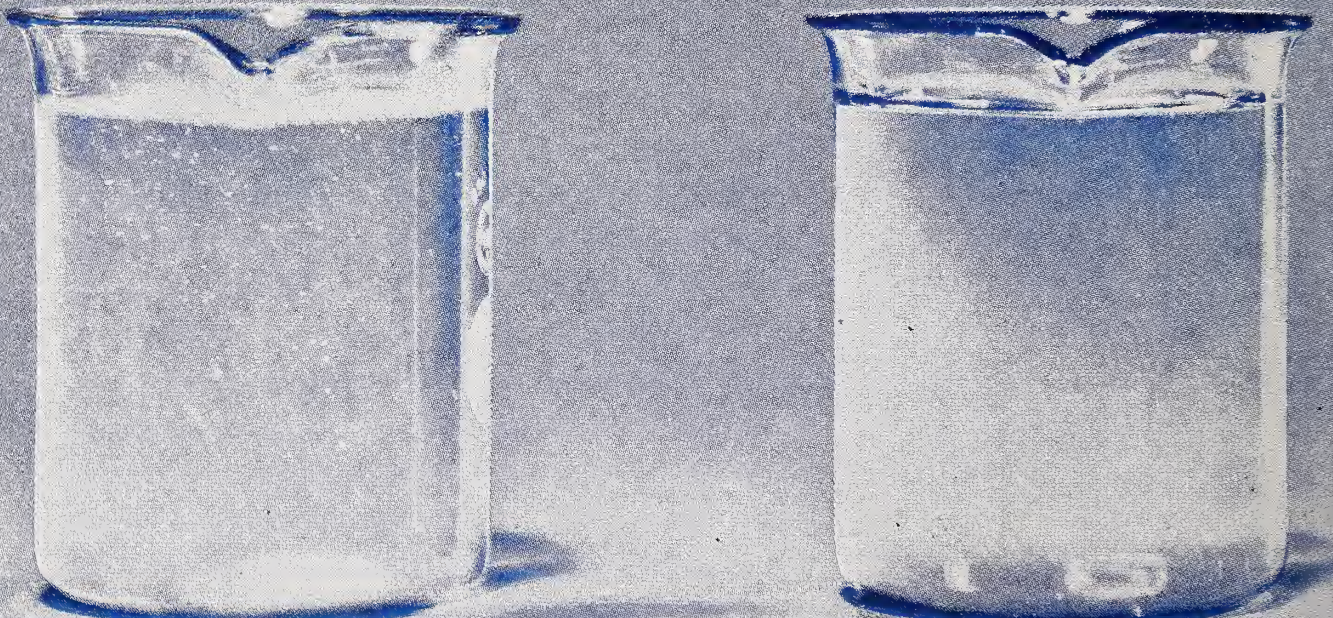
Chief among the drawbacks to aspirin usage is gastric intolerance. This ranges from mild upset and "heartburn" to severe hemorrhagic gastritis.[1-10] Studies performed in conjunction with gastrectomy[4,5] and gastroscopy[2] have shown insoluble aspirin particles firmly adherent to the gastric mucosa and imbedded between rugae. Reactions varying from mild hyperemia to erosive gastritis have been reported to occur in the areas immediately surrounding these adherent particles.[2,4,5] This is reported to be particularly true in patients with peptic ulcer.[4]

CALURIN is the freely soluble, stable calcium aspirin complex. Its high solubility forestalls gastric irritation or damage



Regular aspirin crystals 24 hours after being mixed into water.

Calurin crystals in solution one minute after being mixed into water.

CALURIN*

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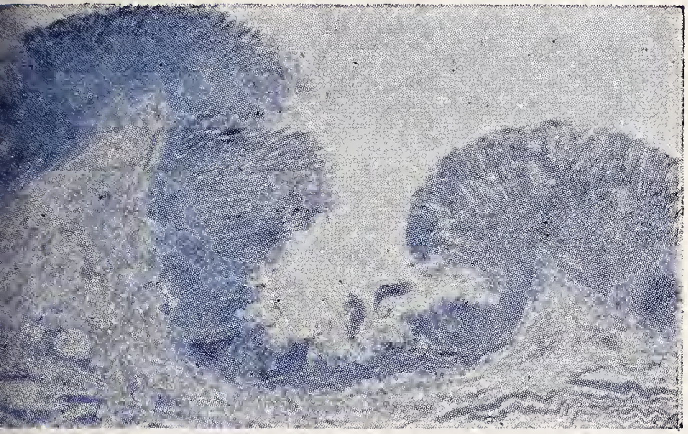
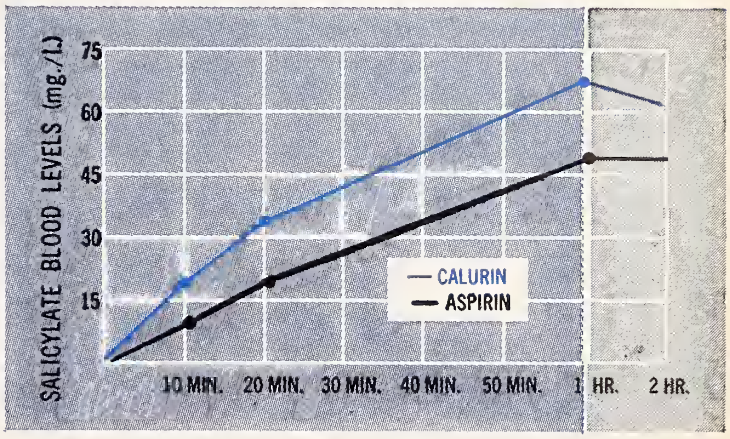


article-induced ulceration — section through lesion ound in gastrectomy specimen. An aspirin particle was ound firmly imbedded in this undermined erosion. Such esions may be associated with the relative insolubility f aspirin, which remains in particulate form after ispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

CALURIN is the aspirin of choice, especially when high-dosage, long-term therapy is indicated:

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2. Produces high salicylate blood levels rapidly for prompt analgesic, anti-pyretic, anti-arthritic effect.
3. Sodium-free — for safer long-term therapy.
4. Flavored: can be chewed or dissolved in the mouth without water if desired — an advantage for patients requiring aspirin administration during the night and for pediatric patients.

osage: Each tablet of Calurin is equivalent to 300 mg. (5 gr.) f acetylsalicylic acid. For relief of pain and fever in adult atients, the usual dose of Calurin is 1 to 3 tablets every 4 ours, as needed; in arthritic states, 2 or 3 tablets 3 or 4 times daily; in rheumatic fever, 3 to 5 tablets 4 or 5 times daily. For children over 6 years, the usual dose is 1 tablet every 4 hours; for children 3 to 6 years, ½ tablet every 4 hours, as required. Not recommended for children under 3.

EFERENCES: 1. Waterson, A. P.: Aspirin and gastric haemorrhage, Brit. M. J. 2:1531, 1955. 2. Douthwaite, A. H., and Lintott, G. A. M.: Gastroscopic bservation of the effect of aspirin and certain other substances on the stomach, Lancet 2:1222, 1938. 3. Editorial Comments: The effect of cetylsalicylic acid (aspirin) on the gastric mucosa, Canad. M. A. J. 80:47, 1959. 4. Muir, A., and Cossar, I. A.: Aspirin and ulcer, Brit. M. J. 2:7, 1955. . Muir, A., and Cossar, I. A.: Aspirin and gastric haemorrhage, Lancet 1:539, 1959. 6. Schneider, E. M.: Aspirin as a gastric irritant, Gastroenterology 3:616, 1957. 7. Bayles, T. B., and Tenckhoff, H.: Salicylate therapy in rheumatic diseases, Scientific Exhibit, Ann. Mtg. A. M. A., San Francisco, alif., June, 1958. 8. Batterman, R. C.: Comparison of buffered and unbuffered acetylsalicylic acid, New Eng. J. M. 258:213, 1958. 9. Cronk, G. A.: aboratory and clinical studies with buffered and nonbuffered acetylsalicylic acid, New Eng. J. M. 258:219, 1958. 10. Editorial: Aspirin plain and uffered, Brit. M. J. 1:349, 1959. 11. Smith, P. K.: Plasma concentration of salicylate after the administration of acetylsalicylic acid or calcium cetylsalicylate to human subjects, Report submitted to Smith-Dorsey from Dept. of Pharmacology, Geo. Washington Univ. School of Medicine, ashington, D. C., Sept. 5, 1958.

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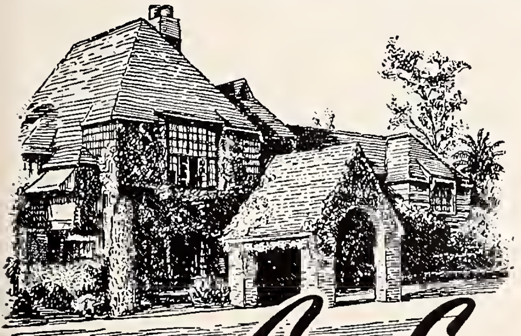

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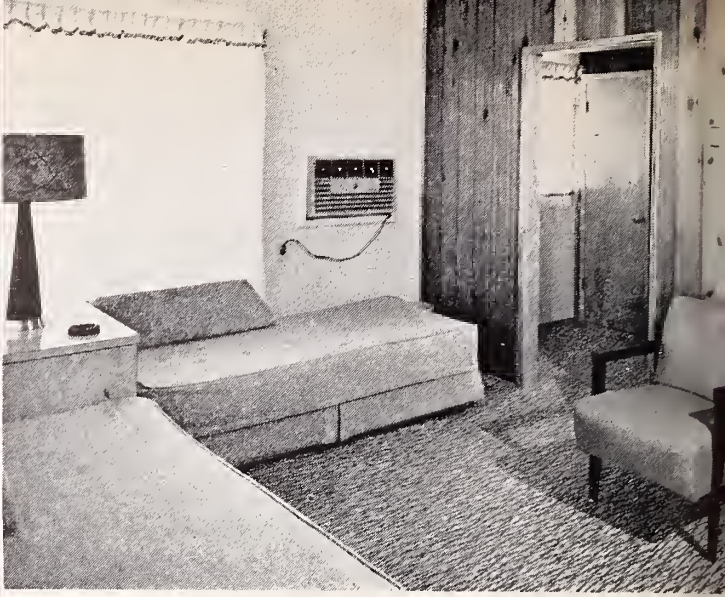

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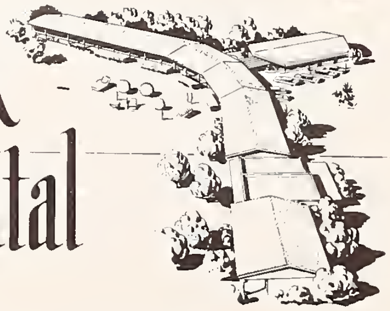

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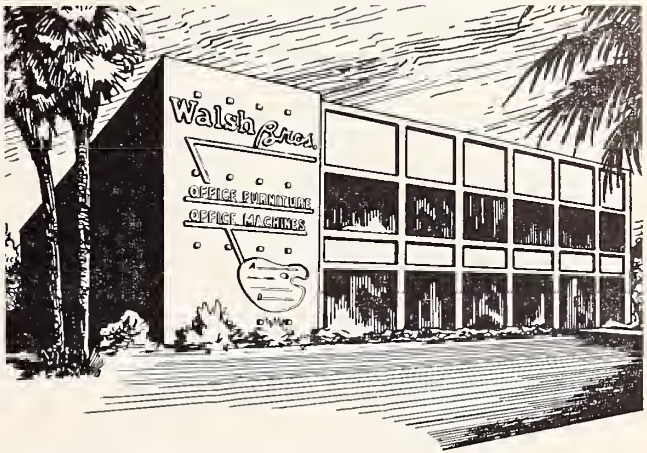

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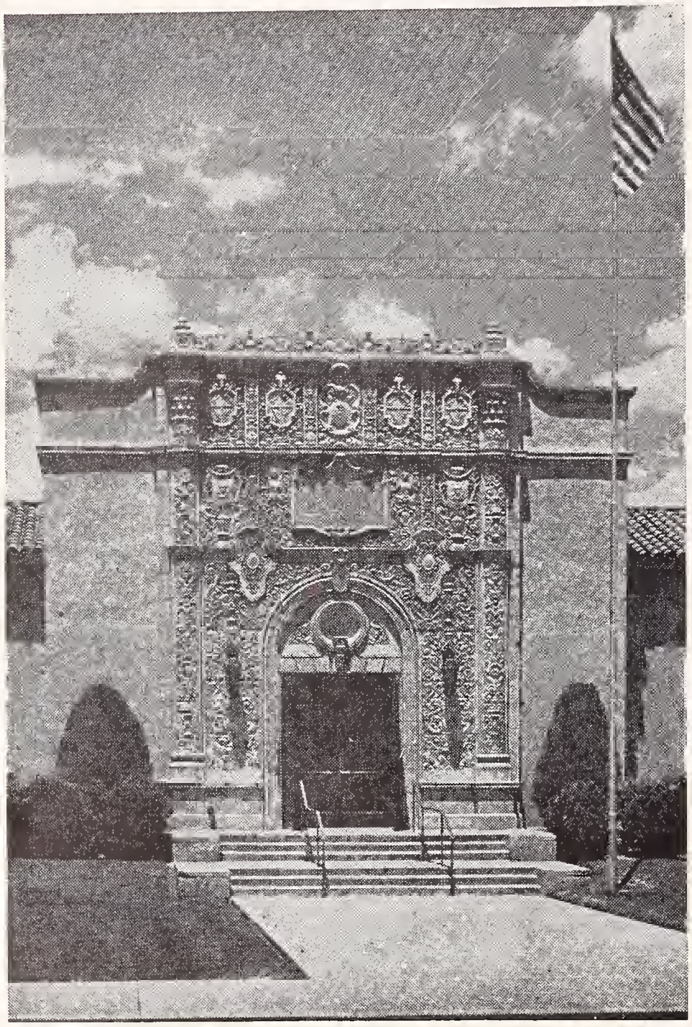

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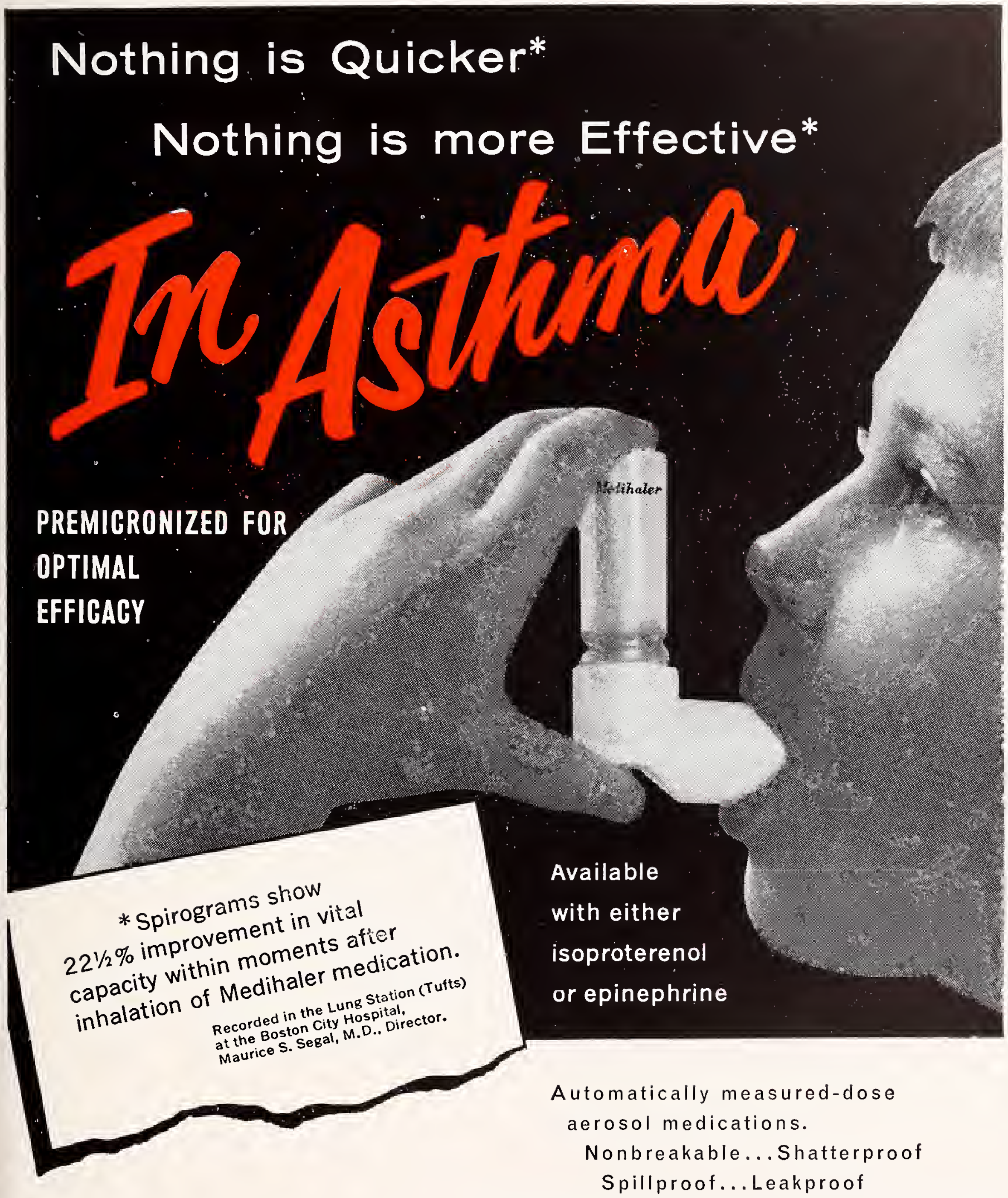
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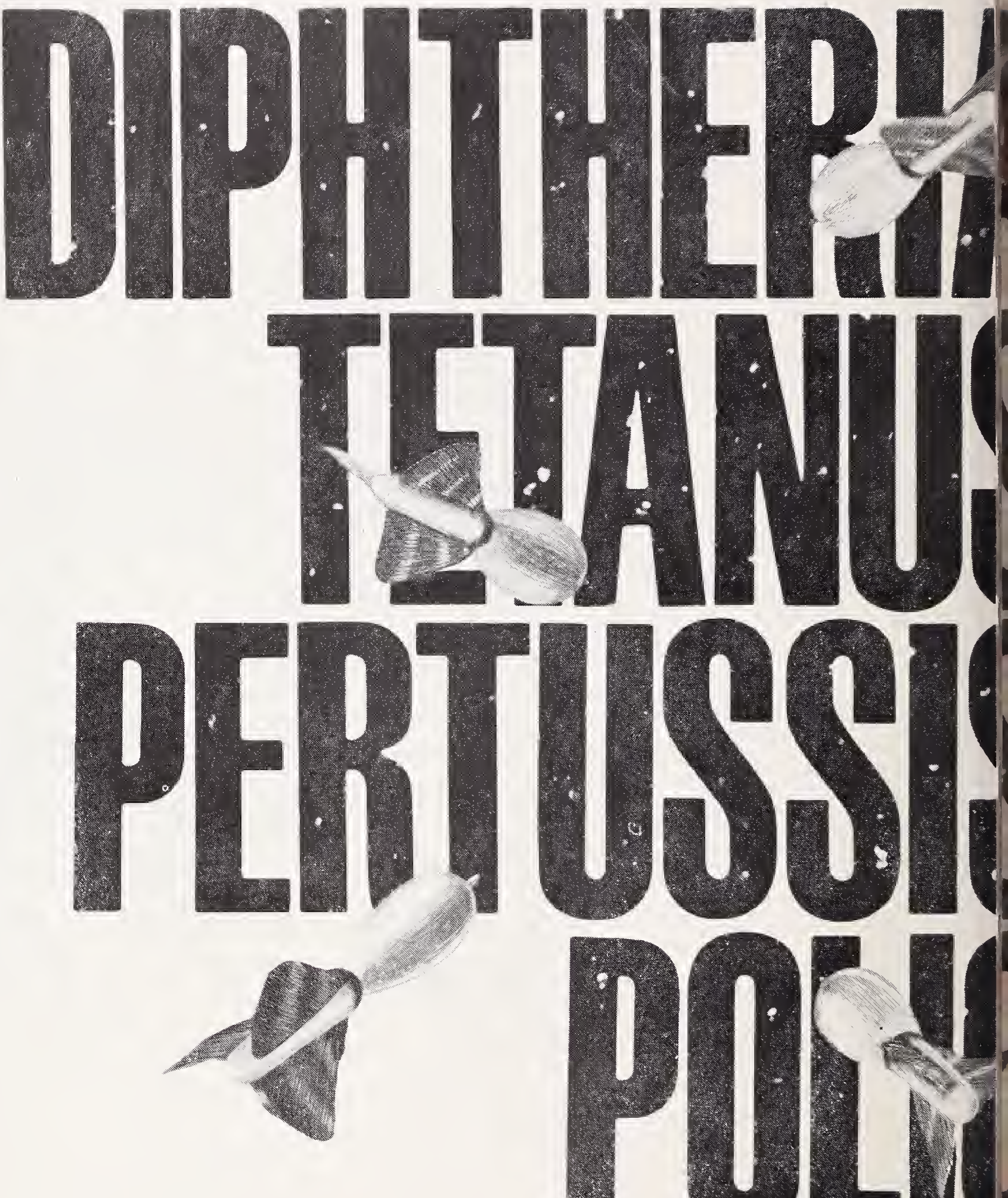
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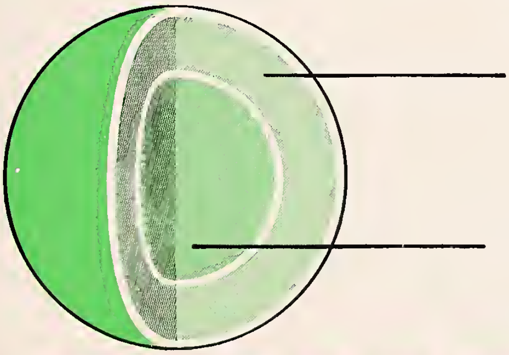

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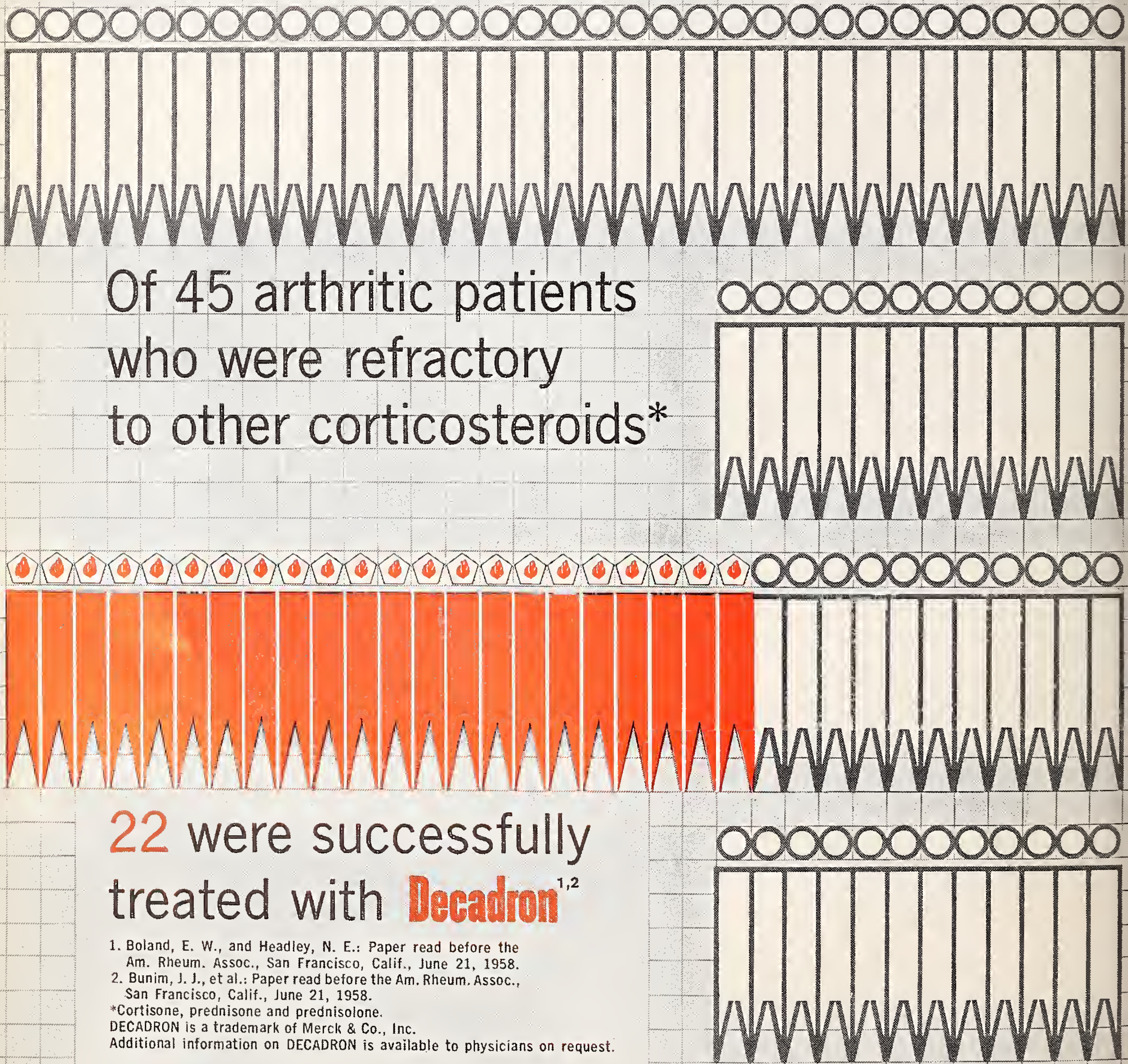

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1. Boland, E. W., and Headley, N. E.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.
2. Bunim, J. J., et al.: Paper read before the Am. Rheum. Assoc., San Francisco, Calif., June 21, 1958.

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Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

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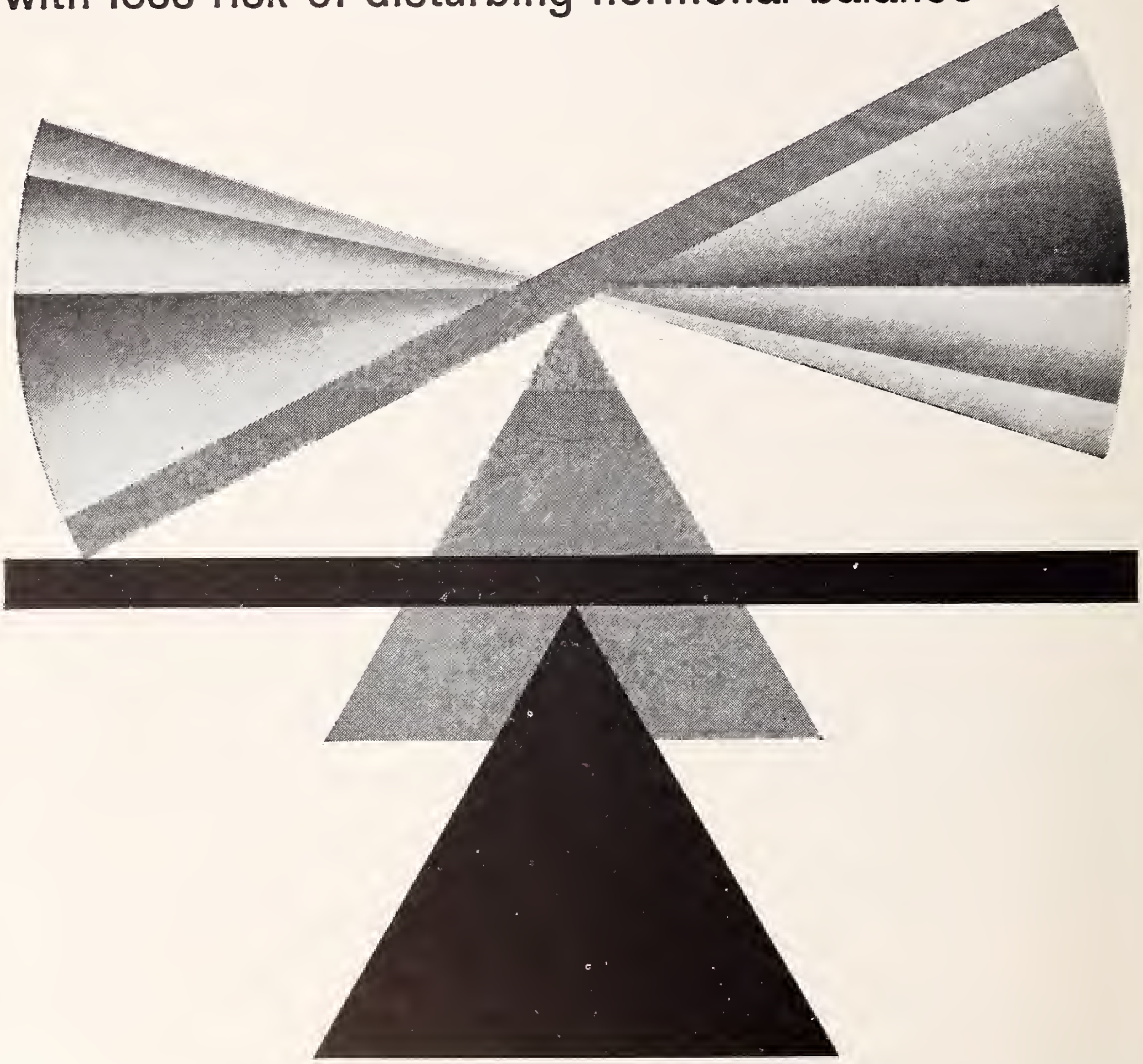

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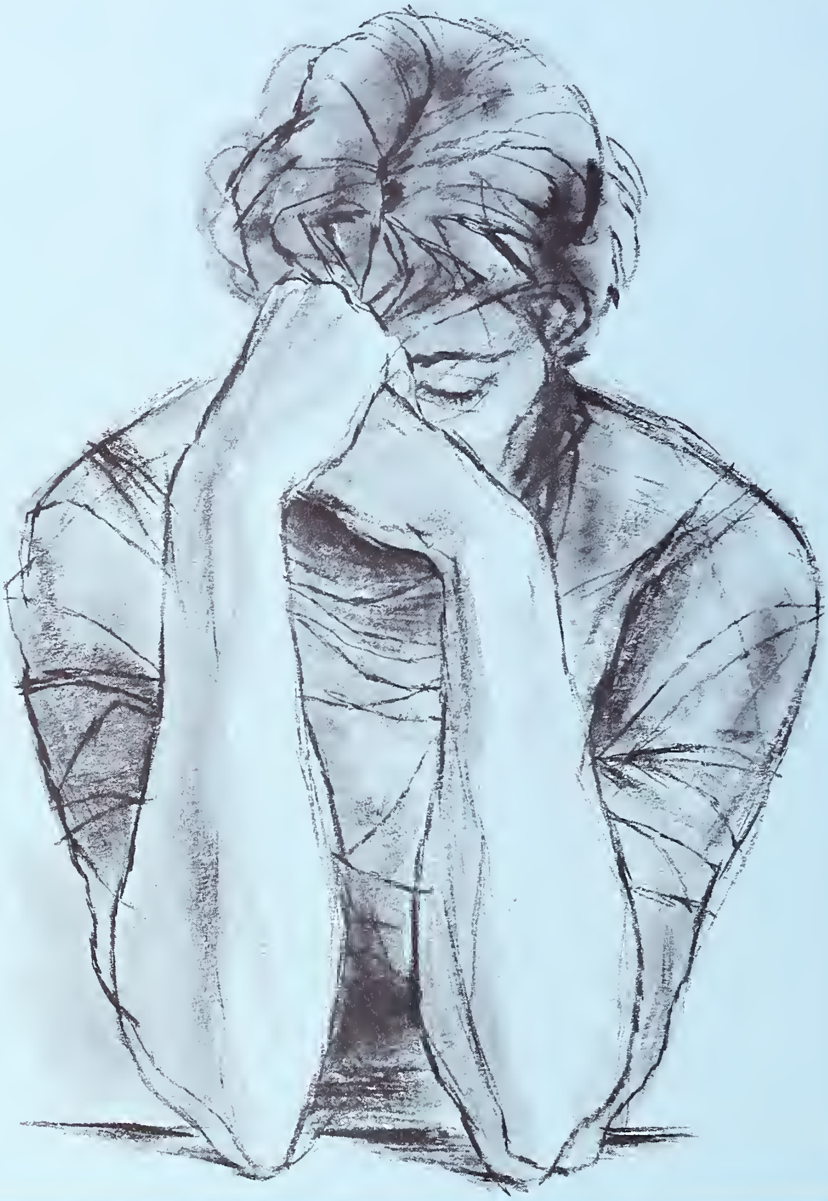

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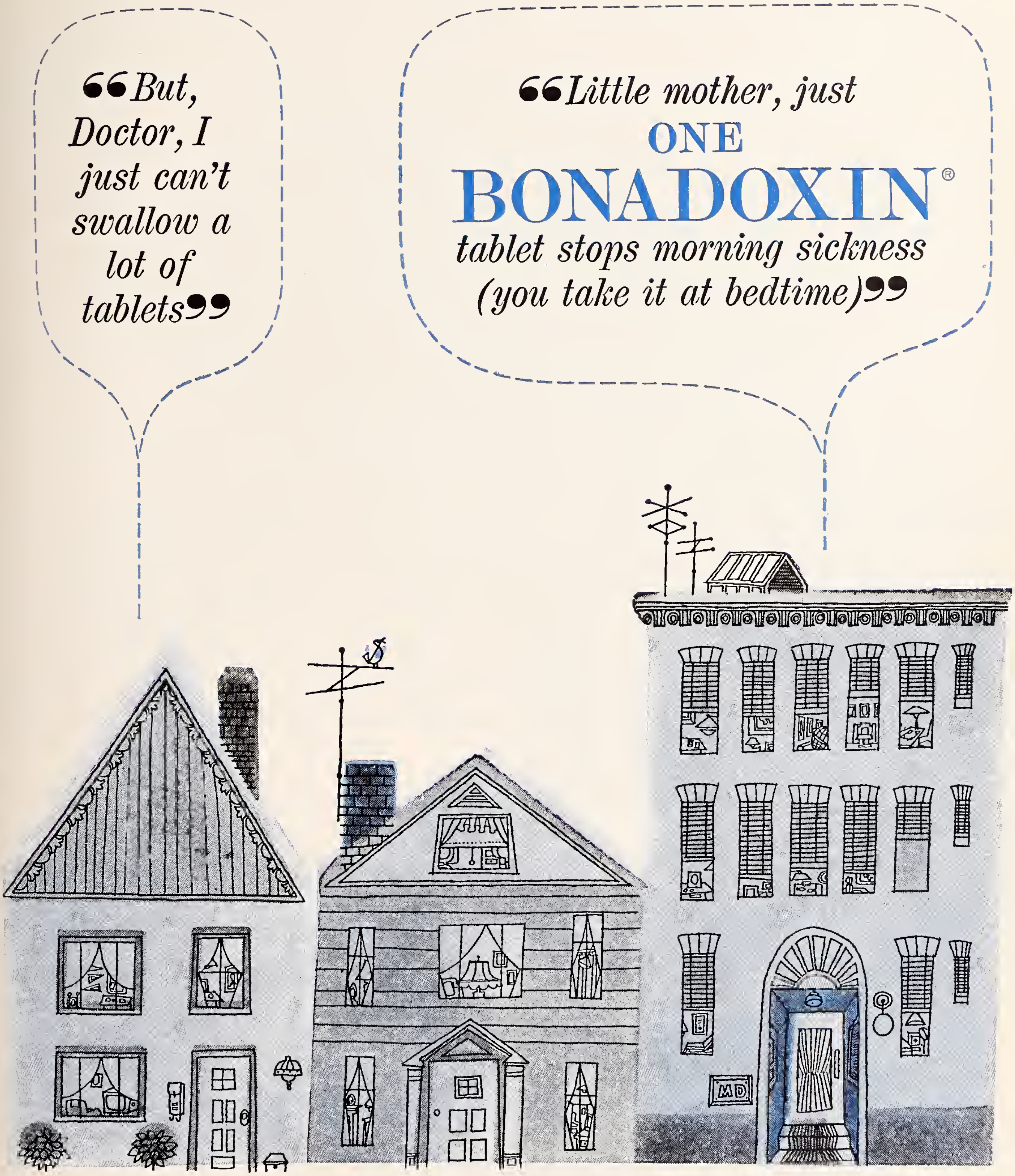
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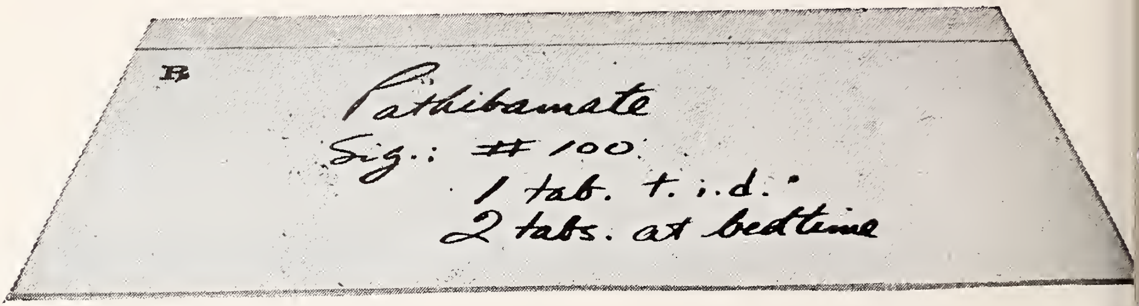

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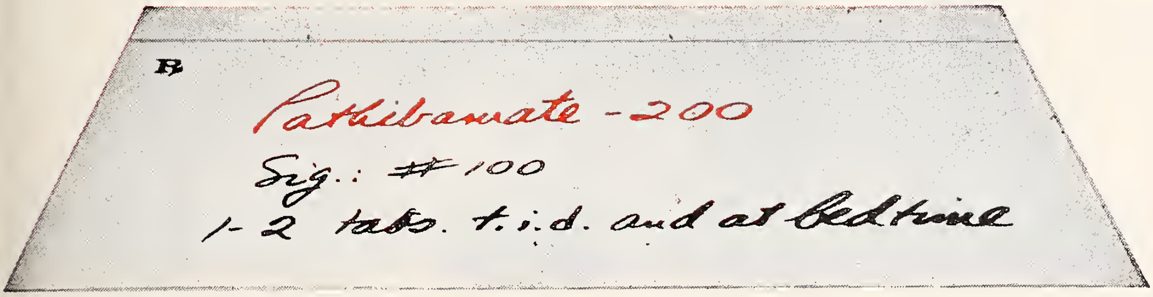

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*PATHILON is now offered as tridihexethyl chloride instead of the iodide, since the latter may interfere with the results of certain thyroid function tests.

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NEW CITRA FORTE CAPSULES...When a Narcotic is Indicated for Colds ■ 5.0 mg. Dihydrocodeinone ■ 3 Antihistam Decongestant ■ APC ■ Ascorbic Acid ■ Prompt patient relief. New CITRA FORTÉ CAPSULES contain the h potency cough suppressant available...Dihydrocodeinone (5.0 mg.). Fast, effective relief from nasal conge muscular aches and other common cold symptoms is rendered with multiple antihistamines and decongestan for patients who have difficulty with syrups, CITRA FORTÉ CAPSULES provide the easy-to-swallow economical ar Not promoted to the laity. Dosage: 2 capsules immediately—followed by 1 capsule every 3-4 hours.

THE CITRA SELECTOR CHART... "Professionally Promoted Medications For the Cough and Cold Season"

products	indications	ingredients	dosage
CITRA FORTE CAPSULES (New)	When a narcotic is indicated for colds	Cough Suppressant / Antihistamines / Decongestant / APC / Ascorbic Acid	2 capsules immediately, then 1 capsule every 3-4 ho
CITRA DEL CAPSULES (New)	Prolonged action cold treatment	Decongestant / Analgesic / Antipyretic / Antihistamines / Ascorbic Acid	2 capsules immediately, the 1 capsule every 8 hours
CITRA NASAL SPRAY (New)	Relief of congestion in colds rhinitis, and sinusitis	Antihistamines / Antibiotic / Decongestant	Spray one time into each n and repeat after few minut

"HE HAS A COLD"

RA-DEL CAPSULES...Prolonged Action Cold Treatment ■ Just one capsule provides up to 8 hours relief from com-
cold symptoms. ■ Prolonged, controlled release form. ■ Decongestant, analgesic, antipyretic and antihistaminic
ons prolonged with new "implant manufacturing technique." ■ Relief starts minutes after initial dosage. Dosage:
psules immediately, followed by 1 capsule every 8 hours.

RA FORTÉ SYRUP...For Complete Cough Control ■ Most powerful cough suppressant...5.0 mg. of Dihydrocode-
e per teaspoon. ■ Multiple antihistamines and expectorant. ■ Prompt, economical cough therapy. ■ Tastes good,
Dosage: 1 or 2 teaspoonsful every 3-4 hours.

products	indications	ingredients	dosage
TRA FORTE SYRUP	For complete cough control	Cough suppressant / Antihistamines / Expectorant	1-2 teaspoonsful every 3-4 hours
TRA CAPSULES	For relief of the common cold	Decongestant / Analgesic / Antipyretic / Antihistamines / Ascorbic acid	2 capsules immediately then 1 capsule every 3-4 hours
TRA SYRUP	For less severe and children's coughs	Cough suppressant / Expectorant / Antihistamines / Decongestant / Ascorbic Acid	1-2 teaspoonsful every 3-4 hours
TRA H.F.	Hay Fever	Broadspectrum Antihistamines / Vasodilator	2 capsules immediately then 1 capsule every 4 hours

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G-11® (Hexachlorophene USP), deodorant

FORTIFIED — with Sodium Lauryl Sulfate and Alkyl Aryl Sulfonate.

DETERGENT — High surface activity in acid and alkaline media.

LOW SURFACE TENSION — Increases penetration into vaginal rugae and dissolution of organisms such as Trichomonas and fungus.

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Buffered to control a normal vaginal pH.

ETHICALLY PKGED, net wt. ....10 oz.

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A School For Exceptional Children

The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

The Hobby Horse Ranch School is a branch of Fairview School in Fishkill, New York which was established in 1936.

Directors: Blanche C. Lightowler, B.A.
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The doctor's room in the hospital is used for a variety of reasons. Most any morning, you will find the internist talking with the surgeon, the resident discussing a case with the gynecologist, or the pediatrician in for a cigarette. It's sort of a club, this room, and it's a good place to get the low-down on "Premarin" therapy.

If you listen, you'll learn not only that doctors like "Premarin," but *why* they like it.

The reasons are fairly simple. Doctors like "Premarin," in the first place, because it really relieves the symptoms of the menopause. It doesn't just mask them – it replaces what the patient lacks – natural estrogen. Furthermore, if the patient is suffering from headache, insomnia, and arthritic-like symptoms due to estrogen deficiency, "Premarin" takes care of that, too.

"Premarin," conjugated estrogens (equine), is available as tablets and liquid, and also in combination with meprobamate or methyltestosterone.

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. . . in nearly all external symptoms of *pain, itching* and *burning*, e.g., sunburn, minor burns, insect bites, abrasions, poison ivy and other contact dermatitis, hemorrhoids and inoperable anorectal conditions, and cracked nipples.

Xylocaine Ointment, a surface or topical anesthetic, gives fast, effective and long lasting relief. Its *water-soluble, nonstaining* base melts on contact with the skin, to assure immediate release of the anesthetic for fast action and it does not interfere with the healing processes.

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XYLOCAINE® OINTMENT
(brand of lidocaine*)
2.5% & 5%
SURFACE ANESTHETIC

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*U. S. Pat. No. 2,441,498 Made in U.S.A.

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ACTIVITY

CLINICALLY
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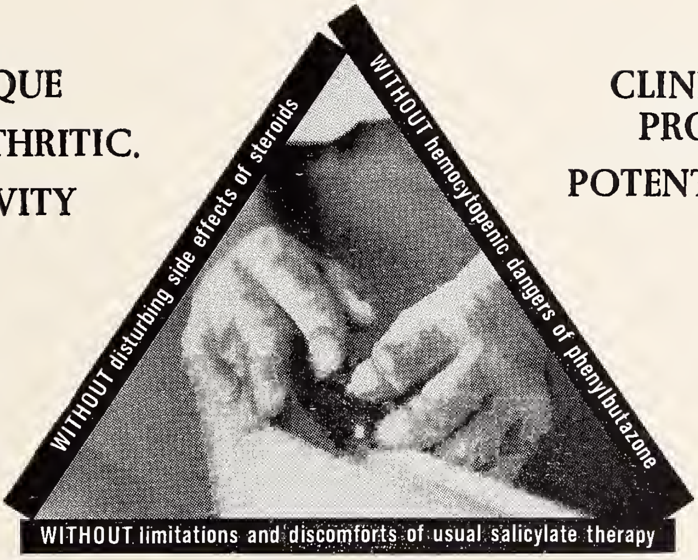
POTENT...SAFE...


WITHOUT disturbing side effects of steroids
WITHOUT hemocytopenic dangers of phenylbutazone
WITHOUT limitations and discomforts of usual salicylate therapy

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BRAND OF CHOLINE SALICYLATE, PATENT PENDING
LIQUID

"Our most striking case was that of a 55 year old white male with rheumatoid arthritis, steroid intoxication, duodenal ulcer, taking 40 mg. triamcinalone/day. He is now on Choline Salicylate [Arthropan] alone and has returned to work."[1]

"In a group of patients who habitually develop gastric distress to moderate dosages of aspirin...all tolerated the new preparation [Arthropan] exceedingly well..."[2]

"Patients who had been taking steroid preparations before using Choline Salicylate [Arthropan] were able to reduce the doses (of steroid) and in some instances to discontinue it entirely."[3]

"In no instances did gastrointestinal symptoms preclude administration of Choline Salicylate [Arthropan]."[4]

These reports have emanated from extensive clinical trials[5] in thousands of patients by more than 180 physicians.

RECOMMENDED DOSAGE: (Adults and children over 12 years) *As an anti-inflammatory agent in rheumatoid arthritis and rheumatic fever:* 1-2 teaspoonfuls, 4 times daily at onset of therapy. *As an analgesic or antipyretic:* 1 to 2 teaspoonfuls, 3 to 4 times daily.

NOTE: Unless satisfactory relief is obtained, it is advisable gradually to increase dosage by increments of 1 teaspoonful per day until maximum benefit, without side effects, is attained. *In every case the dosage should be adjusted upwards or downwards to assure full therapeutic activity up to the limit of the patient's tolerance (in the absence of gastrointestinal distress or early salicylism).*

Because of the special chemical structure of 'Arthropan', alkalies or other buffering substances are not required to protect the stomach wall and should not be administered with 'Arthropan'.

SUPPLIED: 16 and 8 oz. bottles. Each ml. of 'Arthropan' contains 174 mg. of Choline Salicylate. Each teaspoonful (5 ml.) contains 870 mg.

CITED REFERENCES: 1. Clark, G. M.: Personal Communication, 1958. 2. Feldman, H. A.: Personal Communication, 1958. 3. Scully, F. J.: Treatment of Rheumatic Disorders with Choline Salicylate (to be submitted for publication). 4. Friedland, C. K.: Personal Communication, 1958. 5. Complete data available on request to the Medical Director.

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For those patients who complain

carries your patients through the middle of the night

outer layer
disintegrates rapidly to induce relaxation and sleep

inner core
sleep continues smoothly as inner core dissolves

Each Nebralin timed-release tablet contains:

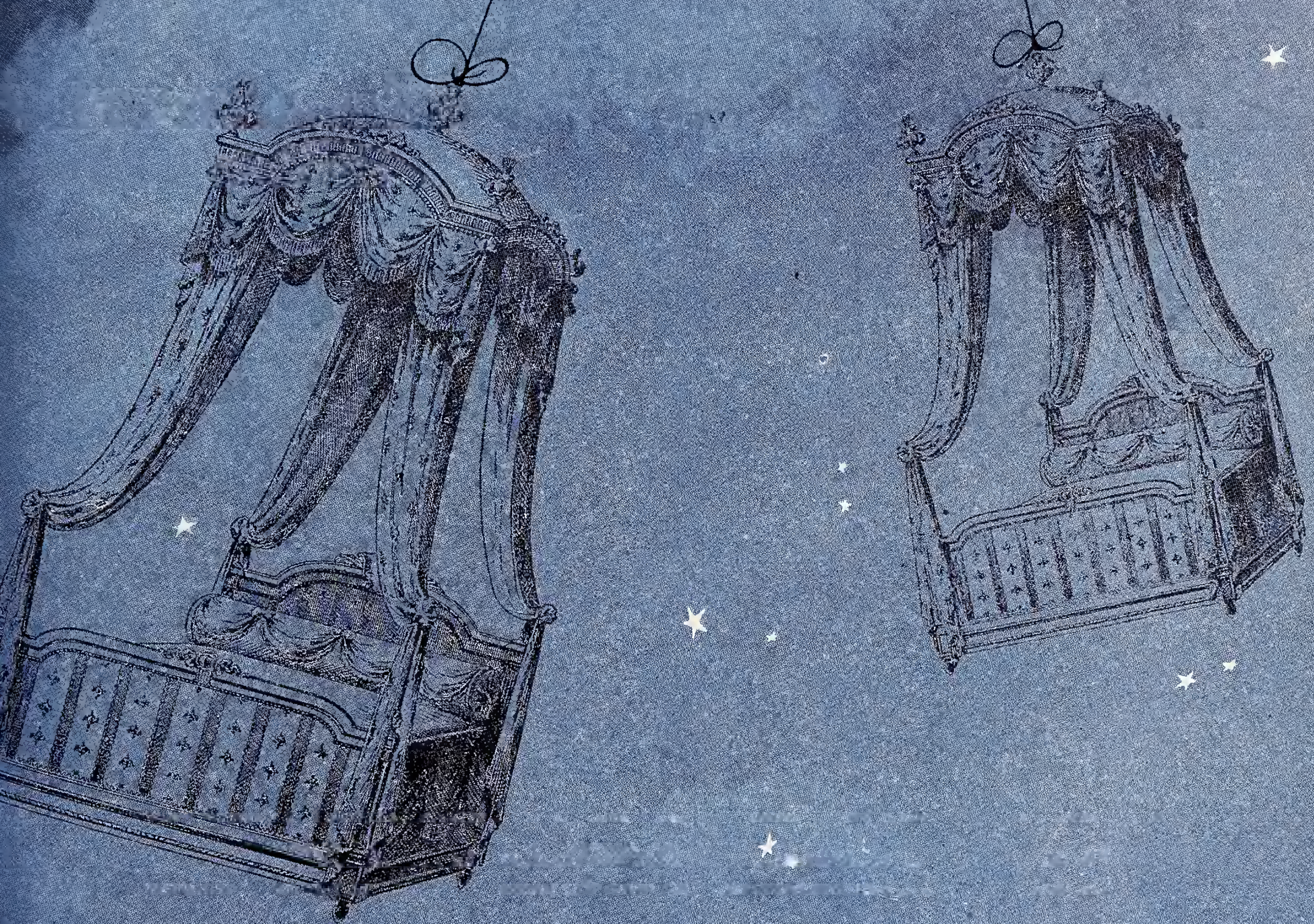
Dorsital* .... 90 mg.
Warning: May be habit forming

Mephenesin ....425 mg.
*Dorsey brand of pentobarbital

CAUTION: Federal law prohibits dispensing without prescription

Dosage: One or two tablets ½ hour before retiring.

about waking up at 2 A.M.



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timed-release tablet

timed-release action for a full night's sleep

NEBRALIN is designed to duplicate the normal sleep pattern. It encourages muscular relaxation and induces sustained, relaxed sleep by the release of Dorsital and mephenesin in a timed-release tablet. Rapid-acting mephenesin quickly relaxes skeletal muscles to overcome "fatigue-tension" and conditions the body for sleep. Dorsital provides CNS sedation to induce sound, relaxed sleep. The initial and sustaining dosages are designed to keep the amount of barbiturate to be inactivated at any one time at a low level tapering toward morning. Evidence indicates that mephenesin is capable of producing sleep,[1] and when combined with a barbiturate enhances barbiturate action.[2-3] Moreover, the integrated action of the two components permits smaller dosages of each,[4] assuring your patients refreshed awakenings without "morning hangover."

1 Schlesinger, E. B.: Tr. New York Acad. Sc. 2:6, (Nov.) 1948.
2 Richards, R. K., and Taylor, J. D.: Anesthesiology 17:414, 1956.
3 Shideman, F. E.: Postgrad. Med. 24:207, 1958.
4 Berger, F.: Pharmacol. Rev. 1:243, 1949.

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Phenacetin (3 gr.)	194.0 mg.
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Phenobarbital (¼ gr.)	16.2 mg.
Hyoscyamine Sulfate	0.031 mg.
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Prophenpyridamine Maleate	12.5 mg.
Phenylephrine Hydrochloride	10.0 mg.

For Quality without Question... Enjoy the unique refreshment of sparkling Coca-Cola

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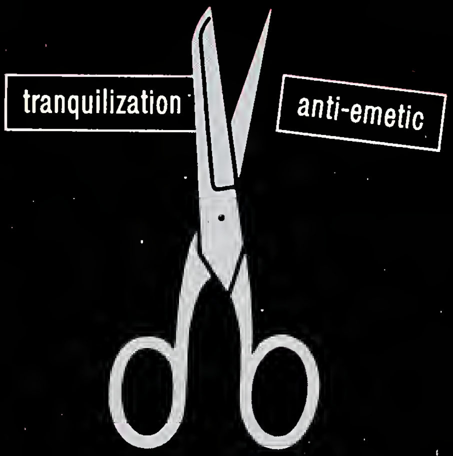
now potent tranquilizer therapy is safer than ever



Virtual freedom of Mellaril from major toxic effects is due to greater specificity of tranquilizing action—divorced from such "diffuse" effects as anti-emetic action.

MELLARIL is virtually free of such toxic effects as

- jaundice
- Parkinsonism
- blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. . . . This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."[1]

SANDOZ

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels

remarkable lack of side effects

In more than 3,000 carefully-followed patients, Mellaril has been almost completely free of such major side effects as jaundice, extrapyramidal symptoms, Parkinsonism, blood dyscrasia, dermatitis even when given in quantities far in excess of the usual dosage.

"POVERTY" OF SIDE EFFECTS

"The most striking aspect of thioridazine [Mellaril] therapy is the poverty of side effects.... In its lack of side effects and low toxicity, it is superior to all other tranquilizing drugs tested. For this reason also it is well tolerated by patients, particularly those who are not hospitalized and who frequently discontinue their medication because of dizziness, sleepiness, increased tension or parkinsonism with other drugs."[2]

NEGLIGIBLE SIDE EFFECTS

"Side effects were negligible at all dosage levels: no incidence of parkinsonism or other extrapyramidal symptoms. Minimal sedation, on the whole lower than with other tranquilizing agents. No alteration in liver function, urine or blood. No photosensitivity. Patient acceptability was exceptional: lack of drowsiness, lethargy or 'washed out' feeling, permitted patients to carry on normal everyday activities. Orthostatic hypotension was absent. The initial 'keyed up' tense feeling common to other drugs of this type was absent.... Patients forced to interrupt treatment with other phenothiazine derivatives because of parkinsonism or other extrapyramidal symptoms were able to continue therapy with thioridazine without appearance of parkinsonism."[3]

SINGULARLY FREE OF SIDE EFFECTS

"The extrapyramidal syndrome was not encountered in any of its forms. Dizziness and sleepiness responded to a reduction in dosage. Other side effects did not occur.... It is singularly free from the side effects ordinarily seen with these [phenothiazine] compounds."[4]

ABSENCE OF SIGNIFICANT SIDE EFFECTS

"None of the following toxic effects, so common after administration of the phenothiazines, was present during the period of Thioridazine administration: Parkinsonism or Parkinson-like symptoms, photosensitivity, orthostatic hypotension, bone-marrow depression."[1]

MINIMAL SIDE EFFECTS

"Side effects such as extrapyramidal activity, jaundice and photosensitivity have not been observed in patients treated with Thioridazine [Mellaril]. Extrapyramidal side effects produced by other phenothiazines have disappeared promptly with no deterioration in the behavioral response when these patients have been shifted to Thioridazine."[5]

NO JAUNDICE

"No allergic reactions were observed such as skin eruptions, jaundice or agranulocytosis. Central nervous system toxicity, as manifested by extrapyramidal effects, seizures, and excitement did not occur despite the use of high doses (up to 2000 mg.) of the drug."[6]

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels

tranquilization | anti-emetic

excellent clinical response

In office practice and in hospitalized patients, Mellaril has proved highly useful for a wide variety of major and minor emotional disorders (such as anxiety, tension, apprehension, alcoholism, agitated psychoneurosis, agitated psychotic states, etc.).

EXTREMELY SATISFACTORY "... produced extremely satisfactory results in the broad therapeutic range represented in this series."[3]

POTENT AGENT "... appears to be a potent agent in the symptomatic management of a variety of psychiatric states."[4]

MAJOR ADDITION TO THERAPEUTICS "This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."[1]

AN ACTIVE AGENT "Thioridazine is an active therapeutic agent. . . . It is effective in a variety of psychiatric disorders, including schizophrenic eactions. . . . The drug is particularly advantageous for a group of schizophrenic tients who are sometimes made worse by other phenothiazine ivatives or Rauwolfia alkaloids. It should also be suitable for treating patients h psychoneuroses and chronic brain syndrome."[6]

.VEN IN VERY SEVERE CASES "Of the 152 patients treated 25 have been ased and they have not suffered a relapse. This proportion is significant e stop to consider that we are dealing only with acute cases which had been sidered hopeless and obviously destined to finish their days in an asylum."[7]

XCELLENT THERAPEUTIC RESPONSE "Patients with emotional sions resulting from the stress and strain of life . . . were treated with llaril at the dosage level of 10 mg. three times daily. 4 such patients, 83 obtained an excellent therapeutic response."[8]

> "... extremely satisfactory results ..." in a clinical spectrum ranging from minor nervous disorders to severe psychotic disturbances[3]

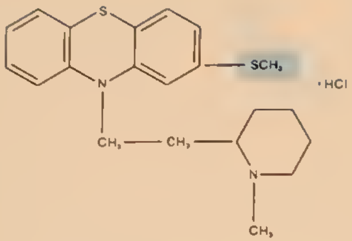
RESULTS WITH MELLARIL IN 194 PATIENTS[3]

ACUTE PSYCHOTICS	CHRONIC PSYCHOTICS	NEUROTICS
83% satisfactory effect	68% satisfactory effect	57% satisfactory effect
Some cases had complete remission of symptoms. Most were able to return home to useful occupations.	Relief of symptoms in cases permitted easier management and a return to a more or less useful life.	Some cases, complete relief of symptoms. Other cases, partial relief of symptoms.

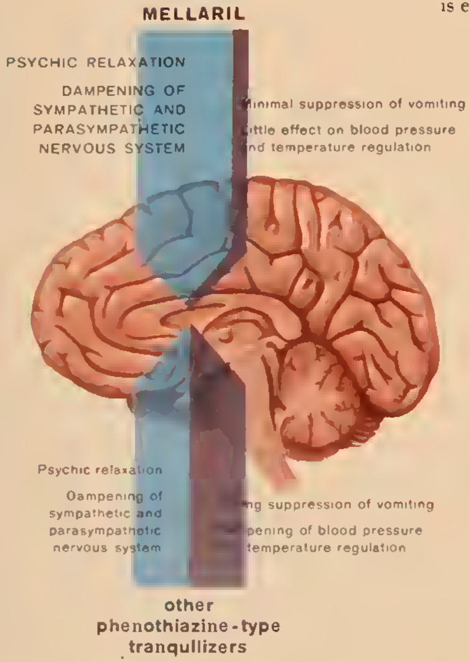
RESULTS WITH MELLARIL IN PATIENTS PREVIOUSLY TREATED WITH OTHER TRANQUILIZERS[3]

DIAGNOSTIC CATEGORY	IMPROVED %	VERY SATISFACTORY %	SATISFACTORY %	UNSATISFACTORY %
SCHIZOPHRENIA				
Acute	89	61	28	11
Chronic paranoid	84.2	31.6	52.6	15.8
Chronic, other	73.9	21.7	52.2	26.1
Residual	57.1	9.5	47.6	42.9
CHRONIC BRAIN SYNDROME	66.6	33.3	33.3	33.3
CHRONIC PSYCHONEUROSIS	62 5	12.5	50	37.5
CHRONIC PSYCHOSOMATIC DISORDERS	75	25	50	25

a new advance in tranquilization:
greater specificity of tranquilizing action plus fewer side effects



Of 109 phenothiazines synthesized by Sandoz, Mellaril was selected as the most promising on the basis of extensive evaluation. The presence of a thiomethyl radical (S·CH$_3$) in the position conventionally occupied by a halogen in other phenothiazines is unique and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
PSYCHIC RELAXATION
DAMPENING OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM
inimal suppression of vomiting
ittle effect on blood pressure
nd temperature regulation
Psychic relaxation
Dampening of sympathetic and parasympathotic nervous system
ng suppression of vomiting
pening of blood pressure
temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy, while achieving psychomotor control in mental and emotional disorders.

5 Virtual freedom from toxic effects — jaundice, photosensitivity, skin eruptions, disturbed body temperature regulation, blood forming disorders have been absent in reports currently available.

These properties add up to a greater margin of safety in general office practice, in ambulatory psychiatric out-patient clinics, and in hospitalized patients.

a guide to administration and dosage

Dosage ranges from 10 mg. three or four times a day in milder situations to 25 mg. three or four times a day for more disturbed patients. In ambulatory psychiatric out-patients, dosages of 50 to 100 mg. three or four times a day have been found adequate. For severely disturbed hospitalized psychotics, dosages of 200 to 300 mg. three times a day may be administered.

Dosage must be individualized according to the condition and degree of response. In all cases, the smallest effective dosage should be determined for each patient.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
ADULTS		
Mental and Emotional Disturbances:		
MILD — where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE — where agitation exists in psychoneurosis, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE — in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
CHILDREN		
BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

PRECAUTIONS: Although possessing a unique structure and a selectivity of action which broadens its therapeutic ratio, the physician should be alert to the possibility of untoward reactions in certain susceptible individuals. In particular, he should watch for potential hemopoiet depression, jaundice or orthostatic hypotension. As w other phenothiazines, Mellaril is contraindicated severely depressed or comatose states from any cause.

SUPPLIED: MELLARIL Tablets, 10 mg., 25 mg., 100 mg. Bottles of 100.

1 Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959. 2. Kinross-Wright, V. J Lecture, Clinical Meeting, American Medical Association, Minneapolis, Dec. 4, 1958. 3. Kinross-Wright, V. J.: Scientific Exhibit, Clinical Meeting, American Medical Association, Minneapolis, Dec. 2-5, 1958. 4. Cohen, S.: TP-21, a new phenothiazine, Am. J. Psychiat. *115*:358, Oct. 1958. 5. Glueck, B.: Scientific Exhibit, American Psychiatric Association, Philadelphia, April 27-May 1, 1959. 6. Hollister, L. E., and Macdonald, B. F.: Presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 1959. 7. Remy, M.: Schweiz. med. Wchnschr. *88*:1221, Nov. 29, 1958. 8. Freed, S. C., in discussion on Thioridazine (Mellaril) in Psychiatric Patients. Hollister, L. E., and Macdonald, B. F., presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 1959

- controls neurotic and psychotic patients with anxiety, apprehension, nervous tension
- virtual absence of jaundice, parkinsonism, photosensitivity, dermatitis
- minimal sedation and drowsiness
- does not mask organic conditions such as brain tumors, intestinal obstruction, etc., because of lack of anti-emetic action
- increased specificity of action results in greater safety at all dosage levels

ANDOZ

August isn't the only hay fever month*
... and there is no seasonal limit
on the antiallergic action of
Chlor-Trimeton® Repetabs® 8 or 12 mg.

safest, best tolerated, for both seasonal and nonseasonal allergies
the most prescribed antihistamine in the United States

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SYMBOL OF THE ONE-DOSE CONVENIENCE YOU WANT FOR YOUR PATIENT

PROMPT REPETAB RELIEF • LASTS ALL DAY OR NIGHT •

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ATARAX
PASSPORT TO TRANQUILITY
BACKED BY A WORLD OF EXPERIENCE

Passport

☞ **a universal record of effectiveness**
In anxiety, tension and agitation, ATARAX "... produced a more favorable state of calm and tranquility than any drug previously used."[1]

☞ **widest latitude of safety and flexibility**
No serious adverse reaction ever documented – five dosage forms and sizes

☞ **chemically distinct among tranquilizers**
Not a phenothiazine or a meprobamate

☞ **added frontiers of usefulness**
These unique benefits in specific indications

ANTIHISTAMINIC
ANTIARRHYTHMIC
ANTISECRETORY

BACKED BY A WORLD OF EXPERIENCE[7]

Dosage: ADULTS, one 25 mg. tablet, or one tbsp. Syrup q.i.d. CHILDREN – 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d.

Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Farah, L.: Internat. Rec. Med. *169*:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. *7*:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. *169*:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. *38*:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. *53*:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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With the intensive publicity being given to porous cigarette paper in recent weeks, Kent believes that doctors would be interested in knowing the scientific facts about the paper used in today's Kent cigarettes.

Kent's exclusive super-porous Micropore paper lets cool air in, lets heat escape through microscopic pores in the paper. The increased oxygen in the tobacco cylinder brings about more complete combustion of the tobaccos. As a result, Kent smokers have been getting a cooler, cleaner, fresher taste in smoking.

When the advantages of Kent's Micropore paper are coupled to Kent's other superiorities, it is easy to understand why more people, during the past year, changed to Kent than to any other cigarette in America.

Kent smokers also enjoy a free and easy draw, which brings through the rich taste of Kent's costly blend of 100% natural tobaccos. In addition, Kent's exclusive Micronite Filter has made a significant contribution in the area of filtration: Kent has reduced tars and nicotine to the lowest level among all leading brands.

The American smoking public was quick to respond to Kent. They discovered—it makes good sense to smoke Kent, and good smoking, too.

If you would like for your own use the booklet, "The Story of Kent," write to:
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A Product of P. Lorillard Company—First with the finest cigarettes—through Lorillard Research!

Remarkable relief from low back pain and dysmenorrhea
Trancopal
THE FIRST TRUE TRANQUILAXANT

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can expec
prescrib

case profile no. 2758*

A middle-aged man had intermittent low back pain attributed to injuries received in an automobile accident three years ago. The pain radiated down both legs, making the patient walk bent over. He also had difficulty in getting out of bed and had to pull his knees up and roll out. Any heavy lifting precipitated a new attack, and he tired easily.

Findings on x-ray of the thoracic and lumbar spine were negative. All other laboratory studies were within normal limits. A herniated disc, though still a possibility, was temporarily ruled out by the neurologic examination. Previous treatment consisted of analgesics, steroids (without success), and narcotics during severe attacks.

On a dosage of Trancopal, 100 mg. t.i.d., this patient is able to walk around almost normally and carry on his regular activities as long as he does not overdo. He has received Trancopal for over seven months with excellent relief of symptoms. There have been no side effects.

*Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.

for low back pai

vhat you
vhen you

THE FIRST TRUE TRANQUILAXANT

rancopal®

for dysmenorrhea
and premenstrual tension

case profile no. 3347*

A 35-year-old housewife had a history of severe dysmenorrhea and premenstrual tension. Menarche occurred at the age of 14. She is a gravida 2, para 1. Her menstrual cycle is fairly regular, and previous medical history indicates no apparent abnormalities. Findings on pelvic examination were negative. Severe tension and irritability routinely occurred from two to seven days before and during menstruation. Cramping was experienced for all three days of the menstrual period. Analgesic preparations provided limited symptomatic relief.

Trancopal, 200 mg. t.i.d., was prescribed for dysmenorrhea. It not only has relieved the severe cramping, but has provided a welcome relief from the irritability accompanying it. Because of these excellent results, Trancopal also was prescribed for her tenseness during the premenstrual period with a most gratifying response.

This patient has successfully remained on the above regimen for over six months without adverse effects.

Turn Page for Complete Listing of Indications and Dosage

THE FIRST TRUE TRANQUILAXANT

Trancopal

potent muscle relaxant

effective tranquilizer

- In musculoskeletal disorders, effective in 91% of patients.[1]
- In anxiety and tension states, effective in 88% of patients.[1]
- Low incidence of side effects (2.3% of patients). Blood pressure, pulse rate, respiration and digestive processes unaffected by therapeutic dosage. No effects on hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications:

Musculoskeletal:

Low back pain (lumbago, etc.)
Neck pain (torticollis, etc.)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome
Fibrositis
Ankle sprain, tennis elbow, etc.
Myositis
Postoperative muscle spasm

Psychogenic:

Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
Alcoholism

Now available in two strengths:

Trancopal Caplets®:
100 mg. (peach colored, scored), bottles of 100.

New Strength

Trancopal Caplets:
200 mg. (green colored, scored), bottles of 100.

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours.

1. Collective Study, Department of Medical Research, Winthrop Laboratories.

Winthrop LABORATORIES
New York 18, New York

Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U.S Pat. Off. Printed in U.S.A. 8-59 (1385 AM)

Incremin®
Lysine-Vitamins Lederle
with iron Syrup
for the undersized underweight child

build appetite
with
B complex
vitamins

prevent nutritional anemia
with ferric pyrophosphate,
a form of iron
exceptionally
well-tolerated

promote protein uptake
with the
potentiating effect
of l-Lysine on
low-grade
protein foods

in taste-tempting cherry flavor

Average dosage, 1 teaspoonful (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline . . .	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	.75%

Bottles of 4 and 16 fl. oz.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

new hope for fetal salvage

DELA

The results of administering Delalutin before the 12th week of gestation to 82 women with habitual abortion were reported recently by Reifenstein[1] in a compilation of data supplied by 45 investigators. Every patient had experienced at least three consecutive abortions immediately preceding the treated pregnancy. More than 68% of these women were delivered successfully and uneventfully following Delalutin therapy.

Boschann,[2] in a study of pregnancies with threatened abortion, found that:

- 37% of 73 pregnancies were carried to term without progestational therapy
- 64% of 42 pregnancies were salvaged by progesterone
- 83% of 73 pregnancies were salvaged by Delalutin

Eichner,[3] found that in Delalutin-treated women, fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved. 108 (76%) of 142 babies of this birth weight survived without mothers receiving progestational therapy, while 16 (100%) of 16 babies of this birth weight survived with mothers receiving Delalutin therapy. A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation.[4] Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active", well-tolerated and long-acting.

According to Tyler and Olson,[5] "These qualities of prolonged action and relative freedom from local reactions make [Delalutin] a generally more desirable therapeutic agent for intramuscular use than progesterone. . . ."

DELALUTIN BABIES WHOSE MOTHERS WERE HABITUAL ABORTE

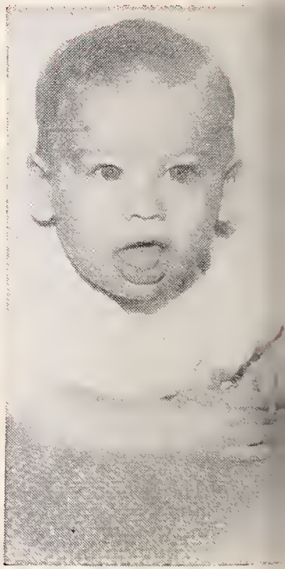
Mary Ann Cribben
Garden City, N. Y.

Amy Sue Greenman
Lincolnwood, Ill.

William Peller
Skokie, Ill.

Randy Sinis
Denver, Colo.

Richard Miller
Denver, Colo.


Scott Knudsen
Norwich, Vt.

References: 1. Reifenstein, E. C. Jr.: *Annals N. Y. Acad. Sc.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. & Gynec.* 76:279, 1958. 5. Tyler, E. T., and Olson, H. J.: *J.A.M.A.* 169:1843, 1959.

LUTIN

improved
progestational
therapy

SQUIBB HYDROPROGESTERONE CAPROATE

DELALUTIN offers these advantages over other progestational agents:

- long-acting sustained therapy
- more effective in producing and maintaining a completely matured secretory endometrium
- no androgenic effect
- more concentrated solution requiring injection of less vehicle
- unusually well-tolerated, even in large doses
- fewer injections required
- low viscosity makes administration easier

DELALUTIN is also potent and safe therapy for: threatened abortion; postpartum afterpains; amenorrhea, primary and secondary; dysfunctional uterine bleeding not associated with genital malignancy; infertility with inadequate corpus luteum function; production of secretory endometrium and desquamation during estrogen therapy; premenstrual tension; dysmenorrhea; cyclomastopathy, mastodynia, adenosis and chronic cystic mastitis.

Administration and dosage:

Because of its low viscosity, Delalutin may be administered with a small gauge needle (deep intragluteal injection). Complete information on administration and dosage is supplied in the package insert.

Supply:

Delalutin is available in vials of 2 and 10 cc., each containing 125 mg. of hydroxyprogesterone caproate in sesame oil, and benzyl benzoate.

Each of these healthy, normal babies was born by a mother with a documented previous history of true habitual abortion, who was treated during her most recent pregnancy with DELALUTIN.

Nina Rutkowski
Roselle, Ill.

Joanne Verderosa
Seaford, N. Y.

Rosanne Guberman
Elmont, L.I., N. Y.

J. Gettemy
Hartford, Conn.

Kenneth Michael Simonson
Denver, Colo.

Karen Mary Nederman
East Williston, N. Y.

Daniel A. Fabrizio, Jr.
No. Massapequa, L.I., N. Y.

SQUIBB *Squibb Quality—the Priceless Ingredient*

*DELALUTIN:® IS A SQUIBB TRADEMARK

NIAMID*

the mood brightener

Lifts the burden of depression... opens the way for a sunnier outlook

New areas of therapy

NIAMID is clinically effective in a broad range depressive states, including: involutional mela cholia, senile depression, postpartum depressic reactive depression, the depressive stage of man depressive disease, and schizophrenic depressi reaction.

A wide variety of psychoneurotic depressions se in general practice also respond effectively NIAMID. Depression associated with the menopau and with postoperative states, and depression a companying chronic or incurable diseases such gastrointestinal and cardiovascular disorders, a thritis, and inoperable cancer, can now be treat successfully with NIAMID.

NIAMID is also strikingly effective for many cor plaints, mild or severe, vague or well defined, wh due to masked depression rather than to organ disease. This masked depression may take the for of guilt feelings, crying spells or sadness, difficu in concentration, loss of energy or drive, insomni emotional fatigue, feelings of hopelessness or hel lessness, loss of interest in normal activity, listles ness, apprehension or agitation, and loss of appeti and weight.

While tranquilizers have had some measure effectiveness in many of these areas, NIAMID nc gives the practicing physician a new, safe drug f the specific treatment of depression without t risk of increasing the depressive symptoms.

New safety

The outstanding safety of NIAMID in extensiv clinical trials eliminates the hepatotoxic reactior observed with the first of the monoamine oxidas inhibitors. These reactions have not been seen wit NIAMID.

Acute and chronic toxicity studies show this di tinctive freedom from toxicity. Moreover, durir the extensive clinical trials of NIAMID by a larg number of investigators, not only has no liver dan age been reported, but only in a very few isolate instances have hypotensive effects been seen.

The absence of toxicity may be the result of th unique carboxamide group in the NIAMID molecul This structure may explain why NIAMID is excrete largely unchanged in the urine, with only insignificant quantities of potentially free hydrazine bein formed. Previously, where a monoamine oxidas inhibitor had been associated with hepatic toxicity there was some evidence that substantial quantitie of free hydrazine were formed in the body.

Background of NIAMID

A major advance in the treatment of mental de pression came with a newer understanding of th influence of brain serotonin and norepinephrine o the mood. Levels of both these neuro-hormones ar decreased in animals under experimental conditions analogous to depression; relief of these mode depressions is seen with a rise in the levels of bot serotonin and norepinephrine.

A second advance came with the development c monoamine oxidase inhibitors, substances whic raise the cerebral level of both serotonin and norepinephrine. The first of the amine oxidase inhibitors raised the cerebral level of serotonin, but di not appear to raise that of norepinephrine level proportionately.

Pfizer *Science for the world's well-being*™
PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.

Attention at Pfizer Research was then directed to a new drug that would overcome this disadvantage. NIAMID significantly raises the cerebral level of *both* serotonin and norepinephrine under experimental conditions.

The dramatic discovery of NIAMID now makes available an extremely effective, safe antidepressant for the successful treatment of a full range of depressive states.

Precautions

Side effects are most often minor and mild manifestations of central nervous system stimulation, modifiable by reduction in dosage; these may take the form of restlessness, insomnia, headache, weakness, vertigo, dry mouth, and perspiration. Care should be taken when NIAMID is used with chlorothiazide compounds, since hypotensive effects have been noted in some patients receiving combined therapy—even though hypotension has rarely been noted with NIAMID alone. There has been no evidence of liver damage in patients on NIAMID; however, in patients who have any history of liver disease, the possibility of hepatic reactions should be kept in mind.

Dosage and Administration

Start with 75 mg. daily in single or divided doses. After a week or more, revise the daily dosage upward or downward, depending upon the response and tolerance, in steps of one or one-half 25 mg. tablet. Once satisfactory response has been attained, the dosage of NIAMID may be reduced gradually to the maintenance level.

The therapeutic action of NIAMID is gradual, not immediate. Many patients respond within a few days, others satisfactorily in 7 to 14 days. Some patients, particularly chronically depressed or regressed psychotics, may need substantially higher dosages (as much as 200 mg. daily has been used) and prolonged administration before responses are achieved.

Supply

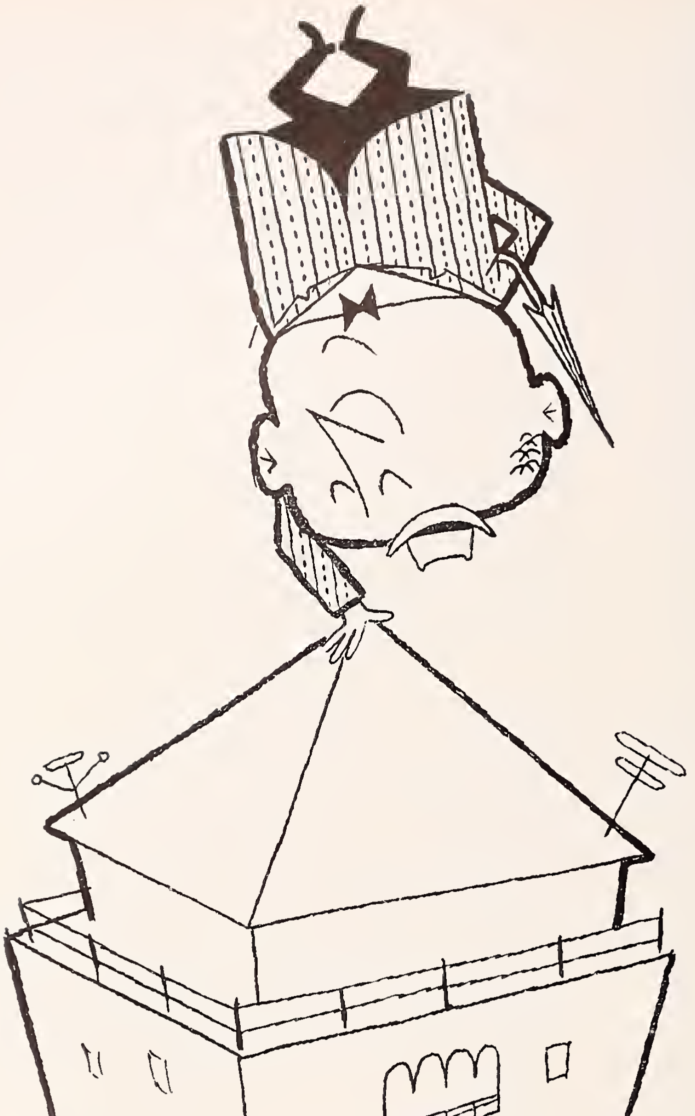
NIAMID is available in: 25 mg., pink, scored tablets in bottles of 100; and 100 mg., orange, scored tablets in bottles of 100.

References

Complete bibliography and Professional Information Booklet are available on request.

*TRADEMARK FOR BRAND OF NIALAMIDE

NIAMID
the mood brightener



MILK "RELAXES"

AMERICAN DAIRY ASSOCIATION OF ARIZONA

dedicated to the health of Arizona's people

new for cough

16 fl. oz.
DIMETANE®
EXPECTORANT
Each 5 cc. (1 teaspoonful) contains:
Parabromdylamine Maleate ... 2.0 mg.
Phenylephrine HCl ... 5.0 mg.
Phenylpropanolamine HCl ... 5.0 mg.
Glyceryl Guaiacolate ... 100.0 mg.
Alcohol 3.5 per cent
In a palatable aromatic base
CAUTION:
Federal law prohibits dispensing without prescription.
Average Dose:
Adults—
1 to 2 teaspoonfuls four times a day.
Children—
One-half to 1 teaspoonful three or four times a day.
ADDITIONAL INFORMATION TO PHYSICIANS ON REQUEST
A.H. ROBINS CO. Inc.
RICHMOND, VIRGINIA

tastes good

the straws just symbolize the good flavor! And DIMETANE EXPECTORANT for cough is as effective as it is delicious. FORMULA: each 5 cc. (1 teaspoonful) contains: DIMETANE (Parabromdylamine Maleate) 2.0 mg.; Glyceryl Guaiacolate 100.0 mg.; Phenylephrine Hydrochloride, USP 5.0 mg.; Phenylpropanolamine Hydrochloride, NNR 5.0 mg.; Alcohol 3.5% in a good-tasting aromatic base.

works better

combines the unsurpassed antihistamine Dimetane with the clinically proven expectorant glyceryl guaiacolate (which increases R.T.F. almost 200%) and two recognized decongestants. When additional cough suppressant action is indicated, prescribe DIMETANE EXPECTORANT-DC, which provides the basic formula with dihydrocodeinone bitartrate 1.8 mg. per 5 cc. (exempt narcotic).

Dimetane® Expectorant
Dimetane® Expectorant-DC

Robins

(WITH DIHYDROCODEINONE BITARTRATE 1.8 MG./5CC.)

be prepared...

fast, effective and long-lasting relief from:

sunburn
poison ivy
insect bites
minor cuts
and abrasions

The water-soluble, nonstaining base melts on contact with the tissue, releasing the Xylocaine for immediate anesthetic action. It does not interfere with the healing processes.

Astra Pharmaceutical Products, Inc.,
Worcester 6, Mass., U.S.A.

XYLOCAINE®
(brand of lidocaine*)
OINTMENT 2.5% & 5%

*U. S. PAT. NO. 2,441,498 MADE IN U. S. A.

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nauseated or vomiting patients
respond quickly and routinely to

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MUCH MORE ACTIVE ANTIEMETIC effect per milligram dosage than with other phenothiazines

MINUS the danger of significant hypotensive reaction

PLUS maintenance of alertness and regular activity

MINUS pain or irritation on deep IM injection

PLUS convenient administration with one of 5 dosage forms (TRILAFON Injection, Suppositories, Syrup, REPETABS,® Tablets)

PROVED CONTROL OF VOMITING OR NAUSEA ASSOCIATED WITH

INFECTION
(*e.g.*, gastroenteritis, pyelitis)

DRUG THERAPY
(*e.g.*, digitalis, nitrogen mustard, aminophylline)

TOXICOSIS
(*e.g.*, uremia, diabetic acidosis, leukemia, carcinomatosis)

MORNING SICKNESS

HYPEREMESIS GRAVIDARUM

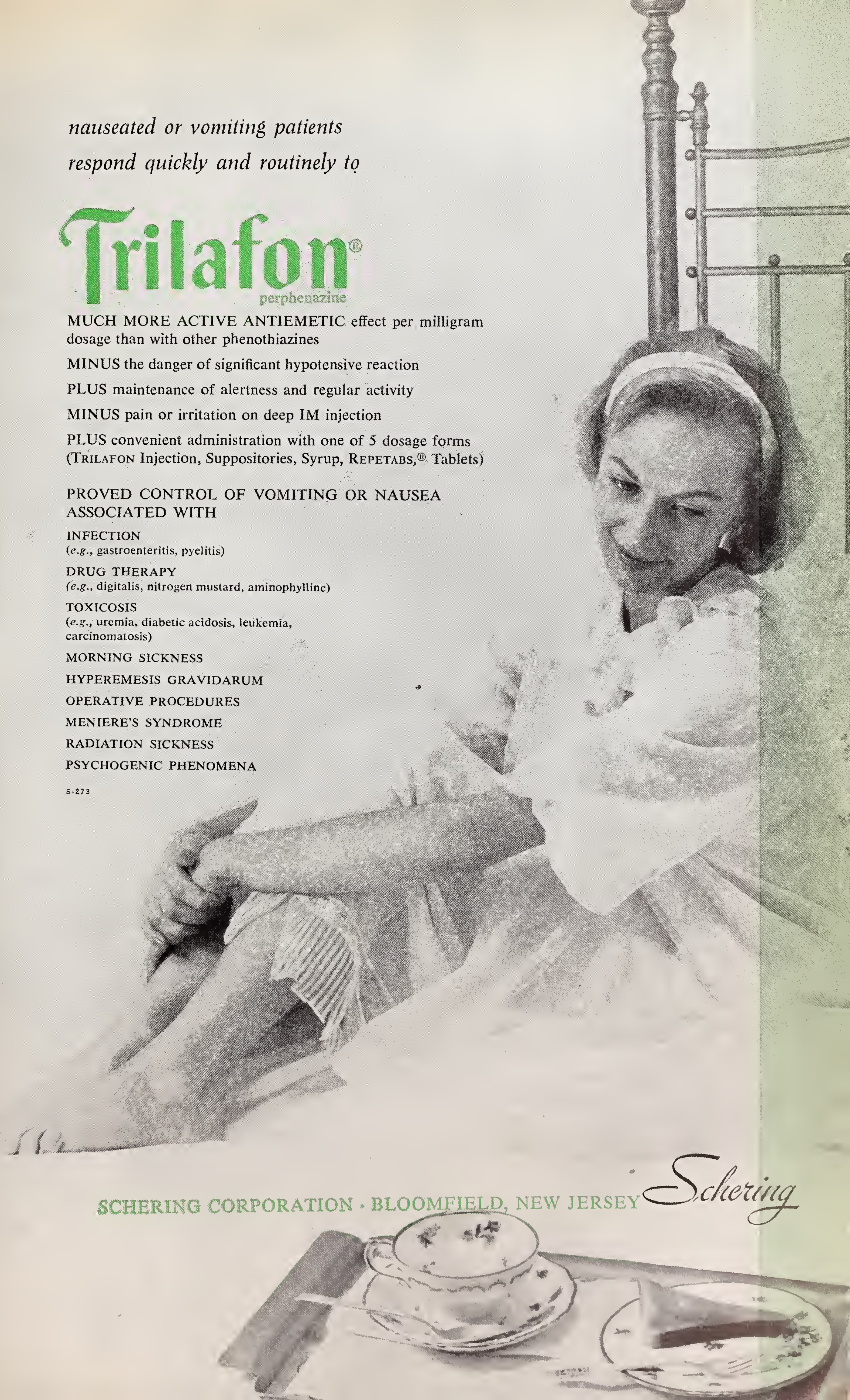
OPERATIVE PROCEDURES

MENIERE'S SYNDROME

RADIATION SICKNESS

PSYCHOGENIC PHENOMENA

S-273

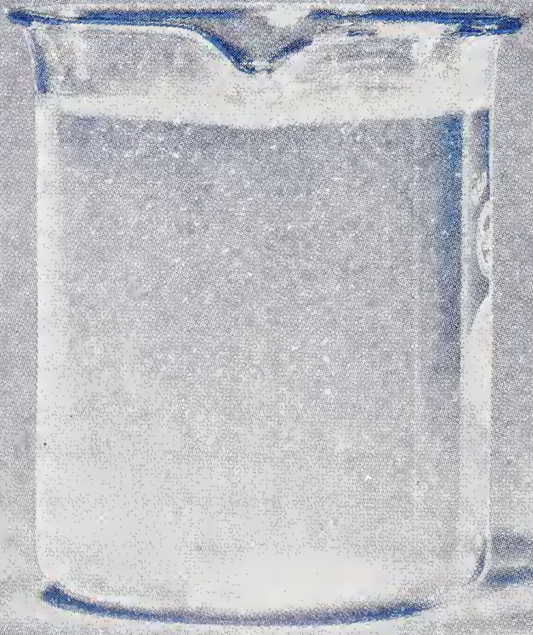


SCHERING CORPORATION · BLOOMFIELD, NEW JERSEY Schering

avoid the risk of insoluble, irritating aspirin particles

Chief among the drawbacks to aspirin usage is gastric intolerance. This ranges from mild upset and "heartburn" to severe hemorrhagic gastritis.[1-10] Studies performed in conjunction with gastrectomy[4,5] and gastroscopy[2] have shown insoluble aspirin particles firmly adherent to the gastric mucosa and imbedded between rugae. Reactions varying from mild hyperemia to erosive gastritis have been reported to occur in the areas immediately surrounding these adherent particles.[2,4,5] This is reported to be particularly true in patients with peptic ulcer.[4]

CALURIN is the freely soluble, stable calcium aspirin complex. Its high solubility forestalls gastric irritation or damage

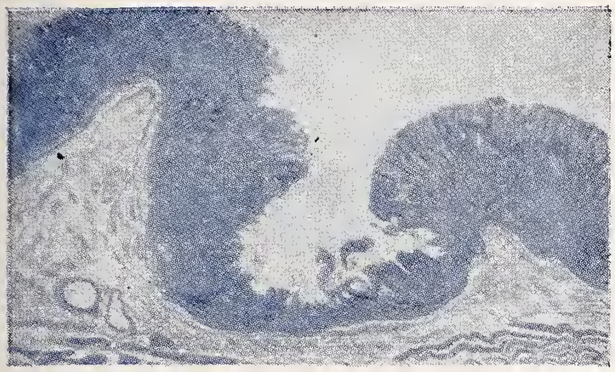


Regular aspirin crystals 24 hours after being mixed into water.

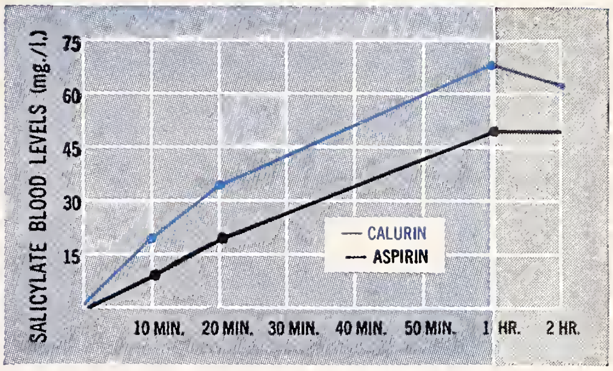
Calurin crystals in solution one minute after being mixed into water.

CALURIN*

STABLE SOLUBLE CALCIUM-ACETYLSALICYLATE-CARBAMIDE



Particle-induced ulceration — section through lesion found in gastrectomy specimen. An aspirin particle was found firmly imbedded in this undermined erosion. Such lesions may be associated with the relative insolubility of aspirin, which remains in particulate form after dispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

CALURIN is the aspirin of choice, especially when high-dosage, long-term therapy is indicated:

1. High solubility forestalls gastric irritation or damage. This advantage is of special importance in arthritis and other conditions requiring high-dosage, long-term therapy.
2. Produces high salicylate blood levels rapidly for prompt analgesic, anti-pyretic, anti-arthritic effect.
3. Sodium-free — for safer long-term therapy.
4. Flavored: can be chewed or dissolved in the mouth without water if desired — an advantage for patients requiring aspirin administration during the night and for pediatric patients.

Dosage: Each tablet of Calurin is equivalent to 300 mg. (5 gr.) of acetylsalicylic acid. For relief of pain and fever in adult patients, the usual dose of Calurin is 1 to 3 tablets every 4 hours, as needed; in arthritic states, 2 or 3 tablets 3 or 4 times daily; in rheumatic fever, 3 to 5 tablets 4 or 5 times daily. For children over 6 years, the usual dose is 1 tablet every 4 hours; for children 3 to 6 years, ½ tablet every 4 hours, as required. Not recommended for children under 3.

REFERENCES: 1. Waterson, A. P.: Aspirin and gastric haemorrhage, Brit. M. J. 2:1531, 1955. 2. Douthwaite, A. H., and Lintott, G. A. M.: Gastroscopic observation of the effect of aspirin and certain other substances on the stomach, Lancet 2:1222, 1938. 3. Editorial Comments: The effect of acetylsalicylic acid (aspirin) on the gastric mucosa, Canad. M. A. J. 80:47, 1959. 4. Muir, A., and Cossar, I. A.: Aspirin and ulcer, Brit. M. J. 2:7, 1955. 5. Muir, A., and Cossar, I. A.: Aspirin and gastric haemorrhage, Lancet 1:539, 1959. 6. Schneider, E. M.: Aspirin as a gastric irritant, Gastroenterology 33:616, 1957. 7. Bayles, T. B., and Tenckhoff, H.: Salicylate therapy in rheumatic diseases, Scientific Exhibit, Ann. Mtg. A. M. A., San Francisco, Calif., June, 1958. 8. Batterman, R. C.: Comparison of buffered and unbuffered acetylsalicylic acid, New Eng. J. M. 258:213, 1958. 9. Cronk, G. A.: Laboratory and clinical studies with buffered and nonbuffered acetylsalicylic acid, New Eng. J. M. 258:219, 1958. 10. Editorial: Aspirin plain and buffered, Brit. M. J. 1:349, 1959. 11. Smith, P. K.: Plasma concentration of salicylate after the administration of acetylsalicylic acid or calcium acetylsalicylate to human subjects, Report submitted to Smith-Dorsey from Dept. of Pharmacology, Geo. Washington Univ. School of Medicine, Washington, D. C., Sept. 5, 1958.

*TRADEMARK

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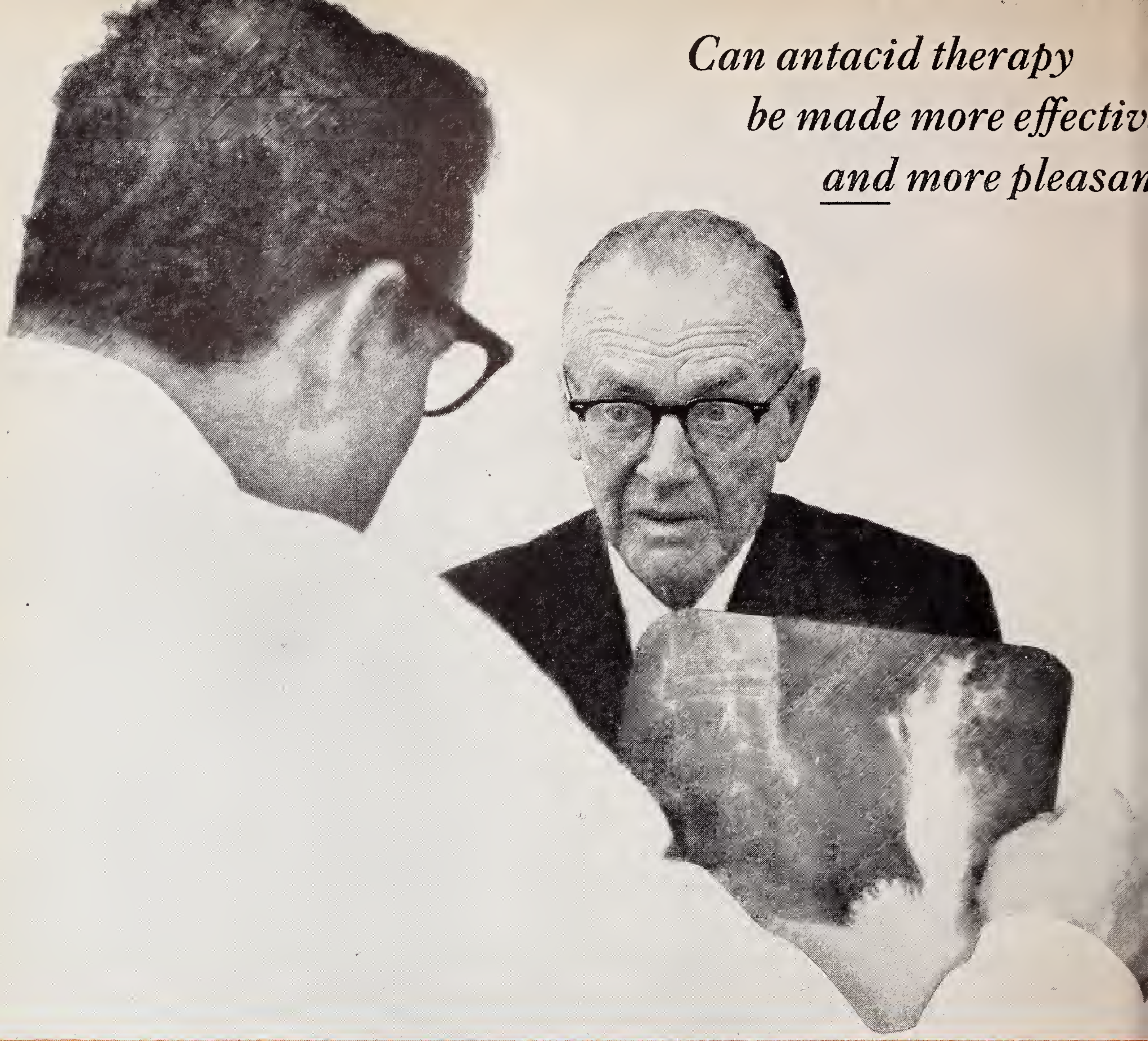

Can antacid therapy
be made more effectiv
and more pleasan

THE MOST SIGNIFICANT IMPROVEMENT IN ANTACID THERAPY SINCE THE INTRODUCTIO OF ALUMINUM HYDROXIDE IN 1929

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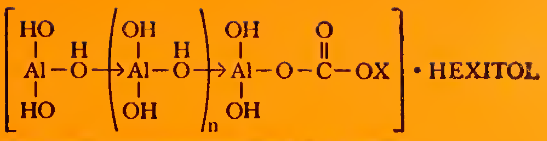
Creamalin® ANTA
TABL

Each Creamalin Antacid Tablet contains 320 mg. specially processed, highly reactive, short
mer dried aluminum hydroxide gel, (stabilized with hexitol), with 75 mg. magnesium hydro

1. *Neutralizes acid faster (quicker relief)*
2. *Neutralizes more acid (greater relief)*
3. *Neutralizes acid longer (more lasting relief)*
4. *No constipation • No acid rebound*
5. *More pleasant to take*

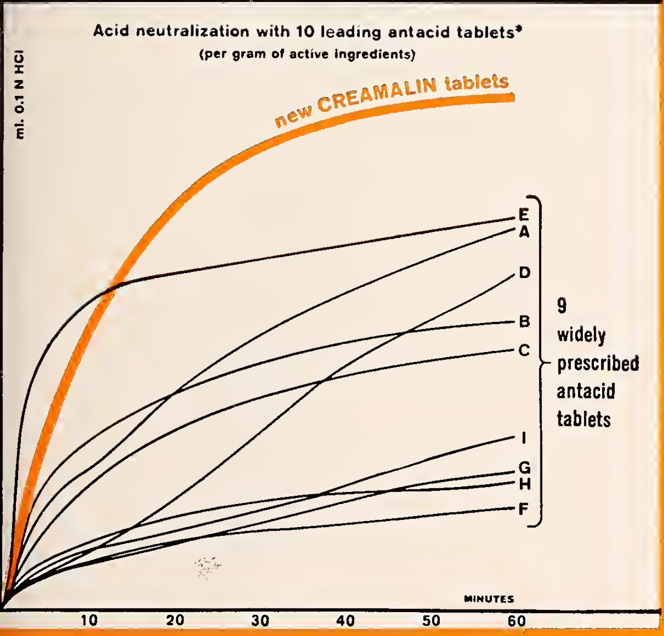
new high in effectiveness
nd palatability



$$\left[\underset{HO}{\overset{HO}{Al}}-\overset{H}{O}\rightarrow\left(\underset{OH}{\overset{OH}{Al}}-\overset{H}{O}\rightarrow\right)_{n}\underset{OH}{\overset{OH}{Al}}-O-\overset{O}{\overset{\|}{C}}-OX\right]\cdot \text{HEXITOL}$$

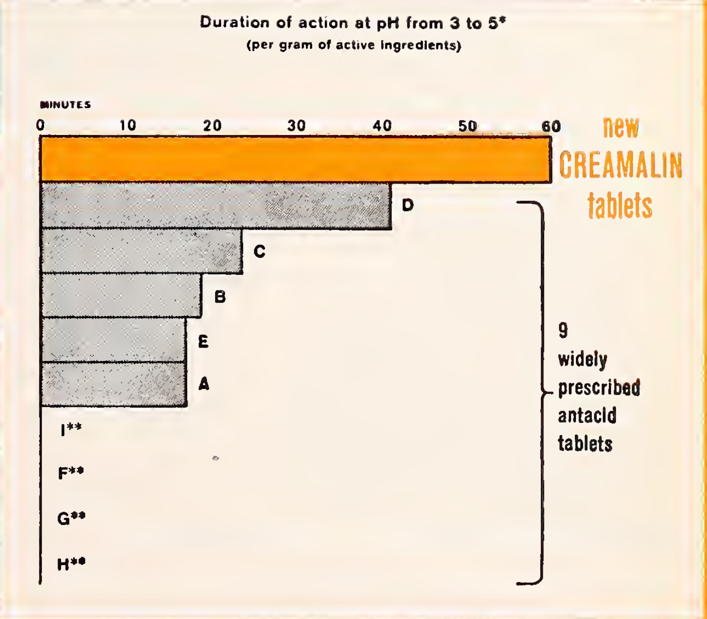
n is at least 1 and averages less than 6. X is a cation.

REAMALIN NEUTRALIZES *MORE* ACID *FASTER*
Quicker Relief • Greater Relief


Acid neutralization with 10 leading antacid tablets*
(per gram of active ingredients)

ts were powdered and suspended in distilled water in a constant temperature iner (37°C) equipped with mechanical stirrer and pH electrodes. Hydrochloric was added as needed to maintain pH at 3.5. Volume of acid required was ded at frequent intervals for one hour.

CREAMALIN NEUTRALIZES *MORE* ACID *LONGER*
More Lasting Relief


Duration of action at pH from 3 to 5*
(per gram of active ingredients)

*Hinkel, E. T., Jr., Fisher, and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.
**pH stayed below 3.

Do antacids have to taste like chalk?

No chalky taste. New CREAMALIN tablets are not chalky, gritty, rough or dry. They are highly palatable, soft, smooth, easy to chew, mint flavored.

• NO ACID REBOUND • NO CONSTIPATION
• NO SYSTEMIC EFFECT

Adult Dosage: Gastric hyperacidity: 2 to 4 tablets as necessary. Peptic ulcer or gastritis: 2 to 4 tablets every two to four hours. Tablets may be chewed, swallowed with water or milk, or allowed to dissolve in the mouth.

Supplied: Bottles of 50, 100, 200 and 1000.

Winthrop LABORATORIES • NEW YORK 18, NEW YORK

action of F*ULVICIN* (▲)
on ringworm:
keratin penetrated from bloodstream;
fungal growth checked

n

ne oral route to ringworm control

new

fulvicin

griseofulvin

orally effective antifungal antibiotic against ringworm

penetration—*first* fungistatic agent to permeate keratin *from the inside*—oral FULVICIN is deposited into dermis, hair and nails—acts to check invading fungi until new, healthy tissue grows out.

effectiveness[1-6]—FULVICIN clears tineas of scalp, body and feet often in 2 to 3 weeks...nails (onychomycosis) usually clear in 3 to 4 months, regardless of previous duration or resistance...promotes rapid relief of itching...prompt loss of hyperkeratosis...rapid fungistasis in infected hair and nails.

safety[1-6]—very low toxicity in therapeutic doses...the few side effects reported (e.g., gastric discomfort, diarrhea and headache) are mild and self-limited.

Rapid clearing of tinea capitis, tinea barbae, tinea corporis, tinea cruris, tinea pedis and onychomycosis caused by Microsporum, Trichophyton and Epidermophyton organisms.

Packaging: FULVICIN is supplied as 250 mg. scored tablets, bottles of 30.

Bibliography: (1) Riehl, G.: Griseofulvin: An Orally Active Antibiotic, presented at Austrian Dermat. Soc. Meet., Vienna, Nov. 27, 1958. (2) Williams, D. I.; Marten, R. H., and Sarkany, I.: Lancet *2*:1212, 1958. (3) Blank, H., and Roth, F. J., Jr.: A.M.A. Arch. Dermat. *79*:259, 1959. (4) Goldfarb, N., and Rosenthal, S. A.: Current M. Digest *26*:67, 1959. (5) Reiss, F.: Medical Circle Bulletin *6*:9, 1959. (6) Robinson, H. M., Jr.; Robinson, R. C. V.; Bereston, E. S.; Manchey, L. L., and Bell, F. K.: Griseofulvin, Clinical and Experimental Studies, presented at Am. Dermat. Assoc. Meet., Atlantic City, N. J., June 3, 1959.

FULVICIN—T.M.—brand of griseofulvin.

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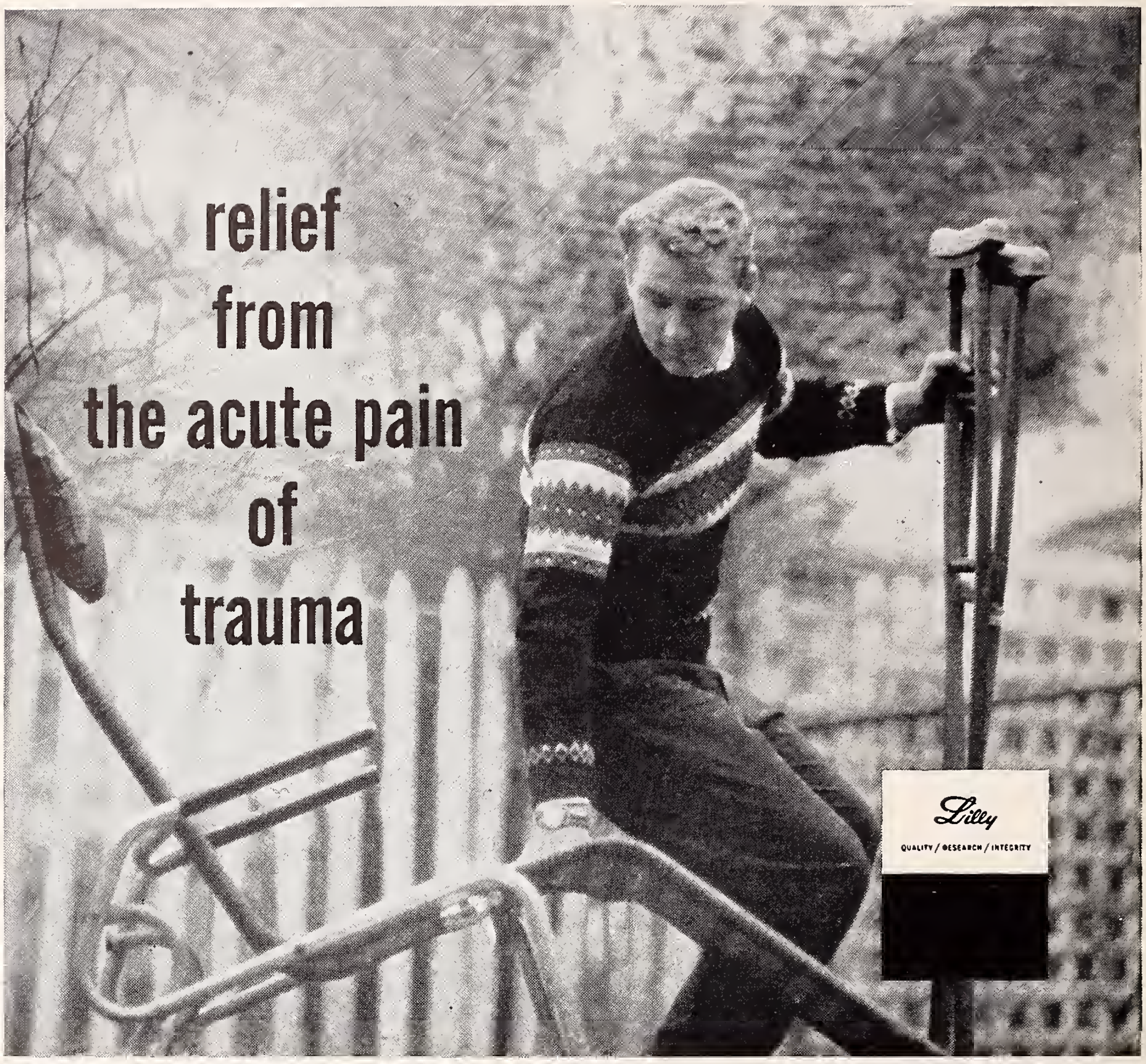
relief from the acute pain of trauma
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QUALITY / RESEARCH / INTEGRITY

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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 9 SEPTEMBER, 1959

Original Articles

THE ACUTE SURGICAL ABDOMEN*

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THERE HAVE been numerous discussions and presentations in the literature on the "acute surgical abdomen." Usually the method is to list a number of surgical conditions which together are known as the "acute abdomen," discussing the differential diagnosis of these among themselves, and then to exclude a number of medical, or "non-surgical" conditions which these simulate.

In these discussions, considerable emphasis is placed on (a) not mistaking different surgical lesions from each other and (b) not operating upon medical conditions.

With these considerations I most wholeheartedly agree, it is much to the advantage of the patient to have a relatively accurate surgical diagnosis, and certainly not to have an unnecessary operation.

However, in the philosophical discussion of these premises, so much space is spent in the differential diagnosis, that little time is left for the discussion of the proper surgical treatment of the individual surgical entities which make up the "acute surgical abdomen." As a result, many poorly timed procedures are done.

At the outset, it must be emphasized that operations on the "acute surgical abdomen" are emergent procedures, usually of a complication of a chronic pre-existing disease.

For the purpose of this paper, we will be considering that there is a surgical emergency, that the diagnosis has been correct in that a medical condition has been excluded, and that surgical intervention is indicated. We will dwell on the usual lesions constituting the "acute surgical abdomen" and discuss some points in their diagnosis, but more fully on the treatment indicated.

In general, these lesions are of two major groups. (1) The inflammatory group, and (2) The obstructive group.

Inflammatory Group

In the inflammatory group, the most common are, (a) perforated peptic ulcer, (b) inflammatory disease of the gall bladder and, (c) appendicitis.

Perforated peptic ulcer

The diagnosis of a perforated peptic ulcer, which of course can be either a duodenal or gastric ulcer, usually presents a simple problem. The typical picture of acute epigastric pain, sudden in onset, replaced in a few moments by severe general abdominal pain and the development of a rigid abdominal wall. The peristaltic sounds rapidly decrease and become absent in the classical case. Free air is seen in the upright film of the abdomen in 78-84 per cent of these cases, indicating a perforation of an air-containing viscus, of which the stomach and duodenum, together with the colon are the ones concerned.

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*Presented before the Brawley (Calif.) Medical Meeting, March 15, 1958.

Such a condition, seen in the first 24 hours, constitutes a surgical emergency, and bearing in mind that this is an emergency, simple closure of a duodenal perforation, and simple excision and closure of a gastric perforation are indicated. It is not our belief, in spite of some reports to the contrary that gastric resection is indicated at this time. Gastric resection is a formidable procedure, and should be preceded by decompression of the stomach, evaluation and treatment of the patients' blood and electrolyte status. We do not feel that the presence of a chemical peritonitis constitutes good preparation for a gastric resection.

We have found that about 60 per cent of these patients having a perforated duodenal ulcer, which at operation is simply closed, have no further symptoms. The remainder will need further surgical treatment either for bleeding, intractable pain, or obstruction of the duodenum.

It is important to note that in a patient, perhaps 50 years of age or older, the symptoms of a perforated gastric carcinoma are identical with that of a perforated peptic gastric ulcer. For this reason we have, in this age group, used a transverse incision, over the right side of the abdomen, which allows of simple extension, in the event that a perforated carcinoma of the cardiac portion of the stomach is encountered. Incident to this, it may be stated that a perforated gastric carcinoma may exist and yet the hole be difficult to find in the fungating mass, and that perhaps the wisest course is to tack the omentum over the entire area of the carcinoma. These are distressing cases, and not followed by very favorable results.

In the closure of a duodenal perforation, no attempt is made to invert the area, as the tissue is extremely indurated and the inversion will slough out, recreating a larger hole in a few days. Rather a through and through closure, with a tag of omentum is usually employed. The excision of the perforated gastric ulcer in a diamond shape is imperative for exclusion, by microscopy of an early carcinoma. This hole is then closed at right angles to the longitudinal axis of the stomach, if possible in two layers.

Inflammatory disease of the gall bladder

We have chosen to call these lesions, "inflammatory disease of the gall bladder" rather than acute cholecystitis, acute hydrops, acute biliary colic, or acute empyema, because we feel that an accurate differentiation pre-operatively is almost impossible.

We feel that clinically, development of severe pain in the right upper abdomen, together with the appearance of a rounded tender subcostal mass, constitute the clinical picture of acute inflammation of the gall bladder.

Not all such episodes require operative treatment, many will subside with conservative therapy, including parenteral fluid, glucose and protein, chemotherapy, and sedation.

However, the continued tender mass, together with the septic type temperature curve and a decrease in the peristaltic sounds constitute, in our opinion, indication for surgical treatment.

Here, also, some controversy exists as to the correct treatment: Cholecystostomy as opposed to cholecystectomy. Our position may be expressed by the following review.

In no other area is the accurate and exact anatomical exposure so important as in the dissection of the cystic duct, cystic artery and common duct, which should be done in the performance of a cholecystectomy. We feel that to try to make such a dissection in the presence of edema, phlegmon, and in some cases almost insurmountable pericholecystic adherence to other viscera, is foolhardy. We consider cholecystectomy with the accurate placing of the ligature separately on the cystic duct and cystic artery an example of "plastic surgery" of the highest type, carrying with it possible fatal outcome if a technical error in identification is made. It is our contention that in no other field of "plastic surgery" would acute phlegmon or edema be considered an indication for definitive procedures. We prefer to evacuate the gall bladder, making care to remove any impacted stones, and insert a large rubber tube into the gall bladder, bringing the tube out an adjacent stab wound. We feel that cholecystostomy is the procedure of choice in such a case. We have never been impressed by the statement sometimes made that inflammation makes the gall bladder "strip off" the liver bed, or "opens up cleavage planes" more satisfactorily.

It has been our experience that the mortality of a cholecystostomy in these cases is extremely low, and that the percentage of patients requiring subsequent biliary tract surgery is not excessive.

Appendicitis

Although the advent of the "chemotherapy" era has decreased many mortality figures in the treatment of inflammatory diseases, acute appendicitis still carries a serious morbidity and mortality.

Epigastric colic, followed by tenderness in the right lower abdomen, in either a male or female, may well indicate the diagnosis of acute appendicitis, and if accompanied by a slight fever, leucocytosis and malaise, few would argue with a diagnosis of acute appendicitis. Within the first 24-48 hours an appendectomy can usually be easily done, either through a McBurney or right rectus type of incision. We prefer the McBurney incision as there is usually less manipulation of the small bowel, and less post-operative ileus.

It is in the patient who has been sick for 48-72 hours or longer, with a diagnosis of acute appendicitis, where difficulty in choosing the proper procedure occurs. We feel, that up to 72 hours, without the presence of a mass, an appendectomy should be done. If a mass is present, either discovered pre-operatively by abdominal palpation, or intra-abdominally after the abdomen has been opened, it is wiser to discontinue the procedure, and to treat the patient by conservative means. It takes considerable professional honesty to refrain from attempting to remove such an appendix once the abdomen has been opened. The family has been told the appendix should be removed, and to fail to so do requires some explanation of the problem, which is not always understood by the concerned parties. This, however should not constitute a barrier to what one sincerely believes is the wisest course.

After 72 hours, or in the obvious presence of a mass in the right lower abdomen, surgical intervention is not indicated, in our opinion. Conservative treatment should be instituted, and over a long series of cases, this has proved to carry a lower mortality than any surgical procedure at this time. Later, after the mass has subsided, and has not been palpable for a period of six months, an interval appendectomy may be performed. The appendix will usually be found to have sloughed at the tip, and the proximal portion, with a rounded terminal end will be all that can be identified.

In the performance of an appendectomy, we do not drain intra-abdominally in any cases. On occasion, when there has been gross contamination, as in a diffuse perforated appendix, we do insert a soft rubber drain down to the peritoneal level, thus draining the abdominal wall.

Obstructive Group

The second large group of lesions constituting the acute surgical abdomen is the obstructive group. In this group are included, (a) mechanical obstruction of the colon, and, (b) mechanical obstruction of the small intestine.

The cardinal signs of mechanical intestinal obstruction are relatively clear. They include colicky pain, obstipation and tympanites. As the *viable* bowel becomes mechanically obstructed, it attempts to overcome the obstruction with vigorous peristalses, and to the patient these hyper-peristaltic waves are evidenced by colic, coincident with the peristaltic wave. In the normal person, the desire to defecate represents this type of colic to a lesser degree. The obstipation becomes evident as the cessation of flow through the gut continues, and may at first be a relative condition, as the distal gut may empty, which may influence the patient to believe that actual cessation of progress has not occurred. Unless the obstruction is very high, tympanites occurs as the proximal gut becomes distended. The exact origin of the gas in the obstructed gut is difficult to prove, various origins have been ascribed to account for its presence. Probably such gas results from swallowed air, with a small amount occurring as a result of putrefaction in the obstructed segment.

Important steps

The diagnosis of mechanical intestinal obstruction is thus made on the above triad; colic, obstipation and tympanites. On physical examination, the auscultation of the abdomen is very important, to determine whether or not peristaltic sounds are present, and if so, what character they are. The peristaltic sounds in mechanical intestinal obstruction are high pitched, crescendo in tone, and have a tinkling sound to them, and they are known as "obstructive borborygmi," and when heard in the presence of tympanites and obstipation, are diagnostic of mechanical intestinal obstruction.

The further workup and surgical evaluation as to treatment of a patient who has been diagnosed as "intestinal obstruction" from this point on is very important. It is obvious that one does not want to unnecessarily explore the abdomen in a patient as critically ill as these patients are, neither does one wish to be guilty of doing a vent type of operation below the point of obstruction.

Either of these two errors may result in the death of the patient, and mistakes of this sort can be prevented by a careful, planned course of action at this time.

The first step is to carefully do a complete physical examination, particularly noting whether a mass is present in the abdomen, together with a pelvic on a female, and a rectal digital on both male and female. Particular attention should be paid to the hernial orifices, which can account for an intestinal obstruction, with little discomfort at the actual point of incarceration. One of the most easily overlooked incarcerated hernias is the left femoral hernia.

Once this examination has been done, with only corroboration of the presence of tympanites and obstructive borborygmi, the next step is to utilize the x-ray for aid.

The first concern is the *flat film* of the abdomen, which is taken in the upright position and has been called the "scout film." This film may show distended bowel, but it must never be considered diagnostic of the site of the obstruction. It is of value in subsequent flat films as an aid in the progress of the treatment, and is of value as stated above, in that it may show air present in the gut. To depend upon a single flat film for the site of obstruction, and to commit a patient to operation on the interpretation of such a film is followed in a high incidence by errors in surgery, leading sometimes to unnecessary exploration or distal venting procedures as noted previously.

One must insist upon a *barium enema* to pinpoint the site of the obstruction either to the large bowl or to exclude the colon as the obstructed segment of gut. The introduction of barium distally can cause no injury when done with care, and if the obstruction is above the ileocecal valve, will allow the colon to fill completely with barium. If the colon will not fill, and a typical obstructed point is found in the colon, the diagnosis has been made, and the subsequent treatment can be instituted with a clear understanding of the problem at hand.

In either small gut or colon obstruction, once the site has been determined, the patient can then be evaluated as to whether or not he is at this time a candidate for surgical intervention. Most of these patients have become dehydrated, and may have a severe electrolytic imbalance. Decompression is instituted by means of a Levine or Miller-Abbott tube, parenteral fluid is given, blood and electrolytic imbalances rectified. At the same time, the patient is being prepared for operation in the event the distention does not subside, and a repeat "scout film" made in perhaps 12-14 hours will show either progress or no progress and operation again is considered.

In the operation to release a small bowel obstruction, an incision is chosen which will expose the terminal ileum junction with the cecum, the collapsed terminal ileum located, and the small gut traced *retrograde* to the site of the obstruction, which is then relieved by whatever manner is indicated. It is well in such a case to avoid entering the abdomen through the old incision, should there be one, as adherent, collapsed, or distended gut is characteristically found in association with the under surface of the old wound.

If the obstruction has been determined to be in the colon, by barium enema, and the conservative measures noted above, with additional enemas having been given to break up impacted feces jammed down on a carcinoma, failed to effect relief, there are two procedures which are considered after the 12-14 hour period has been reached.

These are, cecostomy or colostomy proximal to the obstructed point in the colon. As we feel that the problem here is one of *decompression* rather than *defunctionalization,* in our hands, the procedure usually chosen is a cecostomy. There are some who do not agree with this selection and prefer a colostomy. Much can be said for either procedure, and it is difficult to be arbitrary about one or the other. We prefer cecostomy because we feel that the distended right colon will decompress through such a vent, and the cecostomy will not interfere with the subsequent mobilization of the left and transverse colon when the definitive resection of the obstructing lesion is later performed. Also, the continued function of the cecostomy is of value after the resection is done, to take the pressure off the suture line should a primary anastomosis be done. Another reason that we prefer the cecostomy is that it can be done so much easier than can a colostomy, and it must be recalled that these distended abdomens are not easy to deal with due to the extreme friability of the distended colon. Even bringing up a loop of colon is a considerable amount of shock to the patient in this condition. We feel that the least that can be done at this point that will relieve the acute obstruction is the safest and wisest procedure.

SUMMARY

1. The acute surgical abdomen represents a clinical entity comprising many lesions.

2. Such lesions are to be differentiated from medical or non-surgical conditions which sometimes simulate these entities.

3. The acute surgical abdomen represents true emergencies which, if operation becomes necessary, should be the paramount issue, rather than definitive treatment in many instances.

4. The correct surgical treatment is not always clear cut, and judgment and experience are of great importance.

5. These conditions can be discussed under (1) the inflammatory group, the most common being perforated peptic ulcer, inflammatory disease of the gall bladder, and acute appendicitis.

6. A second large group can be considered the obstructive group, which include both large and small intestinal obstruction.

7. Various steps in the diagnosis and surgical treatment of these lesions are discussed.

PRESIDENT'S SPEECH

TEXT OF THE ADDRESS BY THE PRESIDENT AT THE ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT THE TRAYMORE HOTEL, ATLANTIC CITY, N. J., JUNE 9, 1959.

DR. ORR, Dr. Gunderson, Distinguished Guests, Ladies and Gentlemen:

I am honored in this opportunity to extend greetings and felicitations to you and your colleagues in the medical profession. The American Medical Association, representing physicians in general practice and specialties in many fields, *has brilliantly earned the high* position it holds in the nation. In making this statement, I cannot logically be accused of self-flattery — because even though I am exceedingly proud of belonging to the College of Surgeons, I assure you that my credentials of membership in the college are not of the kind that entitle me to wield a knife upon my fellow man.

Because health, including bodily and mental vigor, is an essential asset in everything we do, all national progress is facilitated by progress in health. Whether it involves healing the sick, guarding the public against quackery, evaluating drugs or helping to maintain high hospital standards, the medical profession is steadily promoting better health among our people.

Indeed, Lord Bryce observed, on one of his last visits to the United States, that "medicine is the only profession that labors incessantly to destroy the reason for its own existence."

By working toward this end, the medical profession promotes national progress.

Today, as every schoolboy knows, diseases like diphtheria, scarlet fever and smallpox, which brought such terror and tragedy to so many American families a few generations ago, have all but disappeared.

In our country, medical science has virtually eliminated typhoid, pellagra and malaria, and is well on the road to conquering tuberculosis and poliomyelitis.

Even more dramatic have been the gains of modern medicine against deaths among infants.

Forty years ago, 10 per cent of the babies born in this country died before their first birthday; today the figure is below 3 per cent. During the past decade alone, deaths in childbirth dropped 65 per cent. Happily also, the nation has experienced a steep decline in deaths from childhood diseases.

For all this the nation is profoundly grateful.

Only a century ago, the average physician in America was a man with rarely more than a high school education. He learned about the treatment of diseases as an apprentice to another man who was called a physician, but who was likely to be as poorly educated as his pupil. We are told that sick people in great numbers avoided physicians as much as they sought them out, since it was uncertain whether they would profit or lose from the encounter.

But the need for better medical education could not long be ignored. And it was no accident that as medicine advanced and professional medical skills developed, in the United States, as in Europe, they were associated closely with

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THE MANAGEMENT OF SEPARATION ANXIETY (SCHOOL PHOBIA): REPORT OF CASE

By Boris Zemsky, M.D., Hubert R. Estes, M.D.
Wallace Diers, Ph.D., Edgar V. Brannon, M.S.W.*

A RATHER common problem coming to the attention of the child guidance clinics is that of the child who has a morbid fear of being separated from his mother. Fathers may also be involved in this syndrome directly, but ordinarily the fear of separation is focused directly on the mother and the father's contribution to the total family problem is somewhat more subtle. This situation is most prominent in children of elementary school age, but has also been observed in high school students.

It is our intention to present a case of separation anxiety, to discuss the dynamics involved in this situation and to illustrate our method of handling the problem and the rationale behind it.

Separation anxiety is a pathologic, emotional state in which child and parent are involved in a mutually hostile dependent relationship, characterized primarily by an intense need on the part of both the child and the parent to be in close physical proximity to each other. This may become manifest in several ways. Stubborn refusal to attend school is the most common presenting symptom. However, this situation may also be manifested by excessive homesickness when the child is away at camp. Inability to visit friends or relatives without the mother. It is noticeable in the clinic setting in that the child frequently refuses to leave the mother in order to come into a play room or an examining room with the examiner.

Because separation anxiety is so frequently manifested by refusal on the part of the child to attend school, this situation is frequently termed, "school phobia." However, we feel that this label emphasizes a symptom rather than the underlying true nature of the disorder, which is anxiety associated with leaving the mother for any reason, rather than simply a fear of school.

The fact that these children stay at home distinguishes separation anxiety as a neurosis, from the delinquent behavior of common truancy. Children with separation anxiety do not go to the park or the movies or the ball game, or any other such place when they are absent from school. They go straight home to be with mother. Similarly, there is seldom any suggestion of antisocial traits in these children as there frequently is in a simple truancy. These facts were noted by Partridge(8) in 1939. In his analysis of 50 cases of truancy, he found 10 that he labeled the "psychoneurotic" group. In these cases, he recognized the importance of maternal over-attachment, and stressed the intrapsychic dynamics of the neurosis in the child.

There have been several reports(1, 2, 4, 9 and 10) on the phenomenologic aspects of this condition, and findings are similar in all of them. The ages of the patients varied from those of pre-school levels to those of adolescence. Statistically, girls were involved in this neurosis more frequently than boys. Economic and cultural factors seemed to have no effect and intelligence usually was average to superior.

Intrapsychic Dynamics Stressed

The intrapsychic dynamics of the child have been stressed by several authors. Klein(7) divided anxiety about school into three categories: (1) fear of teacher, (2) fear of other pupils, and (3) fear of school work with expectation of failure. Thus, although he recognized fear of separation from the mother in the paper, he stressed fear of school as being of primary importance. Other authors have placed more emphasis on the importance of the current relationship between the child and his parents.

Certainly, there is no question but that the child with separation anxiety is strongly ambivalent toward his mother with unconscious death wishes so strong that he must constantly be at her side to assure himself of her safety. However, this neurosis never exists in the psyche of the child alone, but is always intimately associated with a complimentary neurosis in the mother. There is always a highly pathologic and highly charged emotional situation between the two people, mother and child, and the symptoms of the child can be fully understood only through an examination of the relationship between them.

In 1941, Johnson and her co-workers(6) presented a paper on this subject in which the interdigitation of mutual neurotic patterns of mother and child was clearly shown. Their work was facilitated by their technique of collaborative therapy. Since that time, other studies using similar techniques have added to our understanding of this situation. One of the latest is the delightful account by Eisenberg(3) in which the communication of anxiety between mother and child in the clinical setting was very clearly described.

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The dynamics of the situation seem to be as follows: The early dependency relationship between mother and child has never been adequately resolved. Superficial observation may suggest that mother and child have matured normally in this regard, but detailed examination almost invariably reveals evidence to the contrary. There is usually a history of excessive coddling or over-dependence in one form or another.

Frequently, the mother is not receiving adequate gratification of her emotional needs within her marriage. It is common to see a lack of interest in the mother on the part of the husband with extra-marital affairs, excessive drinking, abuse of the mother, and general lack of harmony and companionship characterizing marriages.

Regression

In this setting of a poorly resolved dependency relationship between mother and child and emotional hunger on the mother's part for gratification of her own needs, the child may experience a situation that arouses his anxiety and leads to a state of increased dependence on the mother. Such a situation might be the development of some organic illness in the child, or injury, or some social problem that may have come up in the life of the child. In this situation, the child temporarily becomes anxious and tends to regress to an earlier level of dependence on the mother.

This regression under more normal circumstances would be only transient and not serious. However, because of her own needs, the mother exploits the circumstances of the child's temporarily increased dependence upon her to bind him to her in a malignant, mutually hostile dependent relationship. Through this relationship then, she obtains at least partial gratification of her previously unsatisfied dependency needs and also finds an outlet for the expression of her unconscious hostility. The mother achieves this by fostering and encouraging the child's over-dependence upon her and communicates to the child her unconscious desire for this relationship. Children are especially perceptive to the unconscious attitudes of their parents, and they tend to identify with them and comply. Thus, sensing his mother's strong desire for him to remain in this overly-dependent relationship, the child does so.

An examination of the relationship between the mother and her own mother may reveal a similar situation. There is also likely to be a highly charged unresolved hostile dependent relationship between the mother and her mother so that the situation between mother and child more or less duplicates the situation in the previous generation.

Because a parent's ability to give emotionally is dependent upon the extent to which he has been given during his own childhood, mothers with such a background may resent giving to their child what was not given to them. These circumstances bring about a feeling of hostility toward the child. Guilt over this hostility interferes with the ability to set firm limits with the child, so that the child does not have the security of well defined limits on his behavior. His attempts at being independent and self-assertive however, threaten to interfere with the mother's neurotic satisfaction and are met with hostile outbursts that intimidate the child and make him fearful of expressing his own normal aggressive impulses. Such inhibition acts only to perpetuate the immaturity of the child. We may also see seductive behavior on the part of a parent toward a child of the opposite sex. All manner of over-close physical contact may be reported, such as children being bathed by a parent of the opposite sex, sleeping with parents and ignoring bathroom privacy.

Hostility

Children react to this expression of hostility, whether it is overt or disguised, with the development of hostility toward the parent. This is frequently expressed as an exploitation of the mother's guilty inability to set limits, and this combined with the patient's further exploitation of the mother's desire to have him dependent on her and to do things for him, affords opportunities for the exercise of considerable control of the mother by the child. Such children may become exceedingly demanding of their mothers as long as they stay within the framework of the mutual neurosis that bind them. This hostility within the child, and the guilt connected with it, further bind him to the mother, perpetuating the neurosis and necessitating his constant attendance near her to assure himself that his unconscious death wishes toward the mother do not actually materialize.

Since the setting of limits is inevitable in the classroom and pupils must occasionally be frustrated, the child in such a situation finds a convenient object on which to displace his anger, and, thus, the school teacher may become a phobic object. We frequently find that the parents agree with the child that the school teacher is too strict, or against him for some reason, so that the neurotic pattern in the child simply becomes reinforced.

The case of Mary is a classic example of this type of emotional disorder. Mary, a white, nine-year-old female, was referred by the family pediatrician with the presenting complaint of "fear of school." The parents had been concerned with this problem from the first day the child entered school. She vomited practically every day before going to school and was most anxious and fearful. If she were permitted to stay away from school, her symptoms disappeared quickly and she was relatively free of anxiety. Mary's symptoms were chronic until the latter part of the third grade when the situation became so acute that she was placed on homebound teaching. While on homebound teaching, the patient presented no symptoms; however, the family pediatrician recognized that the child would need help in correcting her problem.

Mary lives in the home of her natural parents. The maternal grandparents live in the city and are described as being extremely close to the patient. The family has a low average standard of living. The father is under treatment for a convulsive disorder which resulted from a head injury sustained approximately 12 years ago. The mother was most co-operative during the evaluation; however, she was extremely anxious and threatened. She appeared for the interviews compulsively groomed. The father did not participate in the study even though this was requested. The mother describes the father as a very passive, dependent man.

History

Longitudinal history reveals that the parents were upset when the mother became pregnant with the patient three months after marriage. The father was in college and the mother was working to help support the family. The mother was "violently ill" during the entire nine months. The family was living with the maternal grandparents at the time, and the grandmother was also extremely upset over the pregnancy. She continually reminded the mother and father that they should not have permitted this pregnancy.

The mother's delivery of the patient was natural with no complications. The child's infant months were characterized by a great deal of crying and considerable vomiting. Toilet training was started at four and one-half months and completed at five months. She was dry at night at the age of one year. However, she had difficulty with bowel movements until 14 months of age. She could not have a natural bowel movement and it was necessary for the mother to use suppositories.

The patient had poor sleep habits. The mother had to rock and fondle the patient to get her to sleep. "She did not like to be left alone — in fact, I could never leave her alone." The mother gave as an example, when she would go shopping and would have to go to the restroom, the patient would become hysterical if she did not take her with her. At the age of two and one-half, the patient is alleged to have had a "spastic stomach."

The patient slept with the mother until age six. At times the mother would attempt to transfer the child to her own room, but the father would encourage the mother to sleep with the child to keep her from crying. The parents never left the patient with a baby sitter with the exception of the maternal grandmother. "We always stuck close to home in case Mary got upset and needed us." Prior to entering the child in regular school, the parents had concluded that Mary was brilliant. In fact, the mother refers to her in her early formative years as "the whiz kid." During the patient's first day in school, she became quite upset and the teacher suggested the mother take her home. The mother protested and insisted on staying in the classroom for a while. After a period of time, the mother "sneaked out of the classroom," but would frequently peep in on the child. The mother, in a rather surprised tone of voice, stated, "But she was fine."

During the child's first year in school, the maternal grandparents moved from the East to the Southwest and shortly thereafter Mary's family followed. The mother felt the child adjusted fairly well during her second year of school except for occasional vomiting in the mornings and the child's general resistance to getting off to school. At the beginning of the third grade, she became quite hysterical with frequent crying spells in school. The school, with the parents permission, changed classes, but there was no appreciable change in Mary's behavior. It was at this time that she was placed on homebound teaching.

Family history reveals the mother was an only child who came from a "very close, loving, kissing family." She was quite shy in school and would never participate unless she was called on directly. After she completed high school, she obtained a modeling job against her parents wishes. She discontinued this vocation after a short period and returned home where she remained even following marriage. She feels she had a very happy childhood and does not remember any unhappy experiences. When frustrated or angry, she would go to her room and read. She recalls the only time she saw her mother angry was, "once she threw a washcloth at me — this was a most awful experience."

The father was also an only child. His father died when he was six years old and he, too, was very close to his mother. The mother feels the paternal grandmother also objected strongly to the father's marriage. The father frequently talks with his wife about his violent temper but the mother cannot remember any temper outbursts. The parents had no insight into their problem. The mother has a constant fear that something will happen to the child and also feels quite guilty when away from the patient, "as though I have cheated her."

Evaluation Experience

Following intake interviews with the mother, the child was scheduled for a phychological evaluation. This was the child's first direct contact with the clinic and she was accompanied by both her mother and the maternal grandmother. The patient entered the examining room with some degree of reluctance but did so with reassurance from her mother that she would wait for her. It was subsequently revealed that the mother immediately departed, leaving the grandmother to wait for the patient.

In general conversation, the patient was asked why she had come to the clinic. This precipitated a tearful outburst with crying and gagging which seemed to have a very forced quality and suggested that the patient was consciously trying to make herself sick in order to avoid the situation. The examiner quietly waited out this eruption and when calm was restored, there was no evidence of this upset in the patient's behavior.

However, following the administration of the verbal section of the intellectual evaluation, there was a second and more violent outburst in which the patient expressed the feeling that no one was waiting for her and, in response to the examiner's reassurance, angrily accused him of lying to her. She left the examining room and discovered her mother had departed. The grandmother initially attempted to soothe and cajole the patient and then resorted to bribery in attempting to get her to return to the examining room. The examiner remained uninvolved and awaited developments.

The grandmother finally led the patient back to the room and told her that she would remain in the room with her. When the examiner set limits on this, the grandmother then informed the patient that she would leave the door open and remain just outside. The examiner again set limits by insisting the door would have to be closed. The patient finally returned to her seat and the grandmother departed, carefully leaving the door slightly adjar.

For a brief period the patient continued to vent anger and hostility toward the examiner who did not react. When calm was again restored, she proceeded through the balance of the intellectual evaluation without further incident and with a remarkably high level of efficiency. Attempts to obtain additional psychological data were greeted with a very hurried, "get through" response. Her efforts were quite impulsive and the examination was terminated as it became apparent that the patient's co-operation could not be further enlisted.

Intellectual evaluation revealed a child of clearly superior intellectual endowment. There was a notable degree of scatter of subtest scores, ranging from low average to very superior. However, most of the tasks presented were executed at a high bright normal to superior level. The most remarkable factor was the patient's co-operative and efficient performance between episodes of marked emotional upset.

There were occasional hostile expressions, primarily in the form of negativism, with a tendency to give up rather readily, but the patient responded to the examiner's urging and usually achieved additional successes. So far as endowment is concerned, there is no question of this child's capacity to readily cope with a regularly graded school curriculum.

At the time of psychiatric interview, Mary was in a marked hysterical state and refused to accompany the psychiatrist to his office. With gentle, firm insistence, the patient finally disengaged herself from her mother's arms and with loud sobs accompanied the examiner. As previously, this emotional state cleared quite abruptly and Mary became co-operative and responsive.

Examination and Diagnosis

Examination revealed an attractive, neat child who related in a pseudo-adult fashion. She was found to be socially isolated at a contemporary level both at school and in the neighborhood. However, Mary expressed positive feelings toward school, teachers and peers without insight into the relationship between her illness and adjustment. Apparently, from her description, this child has observed emotional outbursts, similar to her own, on the part of her father. When returned to the waiting room the emotional state present on departure was reinstated. The examiner's impression was consistent with that of other staff members with emphasis on the inadvisability of allowing this child to remain out of school.

This case was discussed in staff conference with each member of the clinic team presenting his findings and conclusions. The dynamics in this case were manifestly clear and classic. Not only did the mother reveal rejection of this child from the time of conception (nausea throughout pregnancy) but the maternal grandmother, who has been a central figure in this situation, also rejected the child. One sees extreme feelings of ambivalence toward Mary which are defensively handled through a reaction formation of smothering over-protection and the development of a symbiotic type of relationship typically seen between mother and child in cases of this kind. The child's superior intellectual endowment very probably made her more sensitive and reactive to this unhealthy climate.

A diagnosis of psychoneurosis, anxiety reaction, separation anxiety manifested by a school phobia, was made. It is clinic policy to regard school phobias as emergencies. This family was immediately involved in an intensive treatment program, involving the mother and child as well as closely co-ordinating the handling of this case with school authorities. The most important step, which occurs initially, is to get the child back into school by whatever means are necessary. To allow the child to remain at home only fosters and perpetuates an unhealthy pattern which may become fixed. The school phobia, however, is only a symptomatic manifestation of the basic pathology which must be handled directly with the family.

Therapy Sessions

At the first therapy session with Mary, she was informed that she would have to return to school immediately. The therapist shared with her her fears connected with school in a sympathetic manner, but nevertheless, firmly insisted that proper handling of the program necessitated her immediate return in spite of her fears. A positive transference developed quickly and the patient seemed to welcome her interviews with the therapist and to have feelings of friendship toward him. It was apparent in this case, as it has been in many other cases, that the firm setting of limits about return to school did not interfere with the development of a positive transference. On the contrary, the patient responded positively to this display of strength.

Initially, there was considerable resistance on the part of the patient when it came time for her to leave her home and go to school. It was necessary to work with the school, have the truant officer come to the house, and firmly insist that Mary accompany him to school. There were several very violent scenes at this time, but therapist, parents and school authorities all combined to demonstrate a policy of absolute firmness in this regard. Finally, when Mary saw that her hysterical outbursts at home did not prevent her from going to school, she stopped them and there was no further difficulty.

During her contacts with the therapist, Mary began to become aware of her extreme overdependence on her mother, could see how this had been affecting her adversely, and how it had been a source of gratification to both of them. She also came to the point where she realized that it was a solution that could not possibly be permanent.

During the course of her therapy, she attended a summer camp (Tucson Jewish Community Center, summer day camp) without any difficulty, but shared some inner fears concerning this with her therapist. This did not last long however, and she was soon enjoying this experience without undue concern about being away from her mother. Finally, after being seen for 13 interviews, therapy was terminated with what appeared to be not only relief of the initial symptoms of anxiety over separation from her mother, but also a real ego change in both the patient and her mother in the direction of maturation.

Mary's mother was also seen for a total of 13 therapy hours. At the onset, it was directly stated to the mother that Mary must return to school immediately. Mother was told that an arrangement had been set up with the truant officer to return Mary to school if the mother needed assistance. The mother's hostility, evident in the early hours, was clearly illustrated with her handling of this plan. She told her daughter, "Your parents will have to pay $1,000 fine and spend 60 days in jail if you don't go back to school."

At first, hostility was directed to the child as clearly shown by the following, "Bless her heart, she eats like a horse, and I am on heavy sedation." Mother further did not co-operate at the onset in that early therapy hours with Mary revealed that, "Mother did not make me return to school." Also, the truant officer, not completely understanding the problem and the clinic's approach, was not firm with Mary or her mother at first. This was worked through with all concerned and following this Mary was returned to school.

During these early treatment hours, the hostility of mother was drained off onto the truant officer and the therapist. Also during the early therapy hours it was ascertained that Mary reluctantly was attending school and that mother was continuing to do everything for her outside of school hours. This was repeatedly interpreted to mother and had to be worked through hour after hour.

Summer school vacation started shortly after therapy was initiated. Here again the importance of teamwork is pointed up. Plans were made for Mary to attend one of the local day camp schools. Mother's resistance was evident in her refusal to pay the camp fee of $1 per week. The therapist insisted Mary must go to camp school, so mother arranged to pay for her tuition by driving children to the school with a great show of hostility. Mary again went through separation anxiety the first day of camp. Mother's role again was demonstrated when in the following hour she related, "I finally snuck back to see how she was getting on, and there she was playing, bless her heart." Here the mother's hostility was displaced onto the camp directors.

By the sixth hour, Mary was attending camp and mother began to show some insight, "Maybe I have a guilt complex, maybe I did too much for her." During this hour, mother brought up her rejection of her pregnancy with Mary, "I didn't want it, a horrible pregnancy, vomited right up to labor. No more babies for me." Again resistance was demonstrated by mother in that she was not planning to renew Mary's camp enrollment for the second period. This was worked through with the mother resulting in Mary not only returning to camp, but mother agreeing to pay a small fee.

Improvements Noted

During the eighth hour, mother related to Mary being treated as a contemporary by her. Also mother's over-protectiveness was worked with. "She has me over a barrel. I don't want her to dislike me." In addition, the therapist worked with mother's related hostility. The following hours showed a great deal of movement. Mary was attending camp regularly and mother was beginning to understand her hostility, guilt and over-protectiveness. "I am now conscious of it, and not doing as much."

During one of these hours, mother states, "As she gets better, I get sicker." Then for the first time mother was able to work with her own dependency needs as related to her own mother. She brought up early memories of sleeping with her mother. During this time, mother had a return of her needs related to Mary. This was evidenced by her asking Mary every morning before time for departure for school, "How do you feel this morning? Don't be frightened," etc. Mary responded by having some of her anxiety return. This again was worked through, and, at the next hour, mother was able to state, "I don't question her anymore." Mother also reported Mary was doing things alone and she liked it. Mother said, "I was shocked to know she wanted to be alone."

During the final hours, mother continued to work with and understand her role in Mary's problem. A sign of this improvement was mother's report during the last hour, "All is just fine. I didn't ask mother to come and baby sit. Mary is home alone." It is of interest that throughout her treatment sessions, the mother mentioned the father only once and this was in relation to insurance.

As a final note, Mary's mother was contacted recently. She reported Mary attending school regularly and doing beautifully, "She is a wonderful child and I am a happier mother."

SUMMARY

A case of separation anxiety (frequently referred to as school phobia) has been presented. The literature has been reviewed and the dynamic concepts operating have been presented. The collaborative therapy in this case was summarized. It was emphasized that these cases are handled as a psychiatric emergency.

At the Tucson Child Guidance Clinic, we use the total team approach involving the professional staff of the clinic, professional personnel of the school system guidance and counseling department, teacher and principal and the parents (usually mother).

We firmly believe that these youngsters never should be in homebound training programs because this tends to foster the poorly resolved dependency relationship between mother and child, therefore tending to produce a chronic problem. We further strongly believe that one important point in therapy is the immediate return of the youngster to school, if necessary using the services of the truant officer, juvenile court, and teaching personnel. We have demonstrated that using therapy based on well established dynamic concepts these cases can be handled successfully with the child and mother in resolving their mutual dependent relationship. It is felt that professional assistance, including treatment of the parent, usually the mother, and child is essential. We feel many cases may go unrecognized and present this report in hope of focusing on this problem, resulting in early recognition and treatment.

The progress made with this case was exemplified most dramtically by Mary herself. A cousin of hers was having a similar problem. When Mary heard that he, too, was afraid to go to school, she was overheard saying to him, "You go to school. It doesn't make any difference if you are afraid. I don't care if you vomit all the way there. You keep going and stay there."

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the great universities where the spirit of inquiry and instruction were at the forefront. For in medicine, as with all scientific discovery, professional progress flourishes best in an atmosphere of scholarly inquiry.

In reflecting upon the well-nigh unbelievable advances of medicine during these past 100 years, we do not forget the nursing profession and our hospitals, which developed side by side with the medical sciences.

It was not until our War Between the States that, in America, any sizable number of volunteer women — and I stress the word volunteer — recognized that care could help bring the sick and injured back to health. The help they gave was in doing only the simple things — keeping patients clean, feeding them, changing their bandages. Nurses were not then expected or trained to do more. Today the leaders of the nursing profession are college graduates. Many hold Masters' degrees and Doctors' degrees. Within half a century, the nurse has been transformed from a sympathetic attendant to a thoroughgoing professional.

Even as late as 1911, when I joined the military service as a cadet at West Point, the presence of a trained nurse in any military hospital was a rarity. In fact, trained nurses were on duty in only four military hospitals in the United States.

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A NEW ABSORPTIVE FOR MENSTRUAL HYGIENE*

By Karl John Karnaky, B.A., M.D., Houston, Texas

FOR MANY years, man has been seeking ways to absorb the menstrual flow during a woman's menstruation, so that during this period she could live her normal life. The problem of disposing of or absorbing the menstrual flow has been mostly based on unphysiological concepts of the normal mechanisms of the menstrual flow, and especially on misinformation about normal vaginal canal physiology.

An understanding of the normal physiology of the vaginal walls; their structure; their secretion with all its organic and inorganic chemistry; the hydrogen concentration (pH) of the normal vagina before, during, and after the menstrual flow; the bacterial flora; the glycogen content of the vaginal wall; the glucose content of the vaginal secretion; and the anatomy of this structure is also essential to the study of the disposal or the absorption of the menstrual flow as it comes into the vagina from the uterine cavity and through the cervical opening.

Normal Menstruation

The normal physiology of menstruation is well known by all physicians; i.e. that the pituitary gland gives off secretions which reach the ovaries and cause one of the ovaries to extrude normally one egg (follicle). If this egg is not fertilized, then the endometrium begins to desquamate and the spiral arteries and veins, especially the veins, begin to pour out the blood which washes off the desquamated epithelial lining of the uterus into the vagina, where there are many kinds and forms of pathogenic and non-pathogenic vaginal micro-organisms. These micro-organisms begin to metabolize the menstrual blood, serum, proteins, trace elements, enzymes, and other food material, and to grow and multiply. Some of the odors which occur during the menstrual cycle are due to the bacterial waste products and gases that the bacteria give off during metabolism of the menstrual flow which contains protein, carbohydrates and fats. The highly buffered pH produced during the menstrual flow is due to bacterial action on this blood within the vagina.

It appeared to this investigator while treating many women during the menstrual flow, that the two present methods of absorbing the menstrual flow were far from adequate. It was thought that some method should be devised so that as soon as, or just before the menstrual flow reaches the vagina, where it begins to deteriorate, it could be changed into some non-toxic, non-irritating, inert salt or salts, or some inert chemical which no longer is blood, but dry, fine powder. This changed menstrual blood must be non-toxic and non-irritating. This hemoglobin material should be of such nature that some of it can be reabsorbed back into the general circulation and thereby prevent the woman from losing the entire amount of blood passed at each menstrual period. Some of this hemoglobin material apparently is re-absorbed as salts and re-utilized in the hemopoietic system.

Chemicals for Menstrual Hygiene

After this investigator had worked clinically for more than 25 years on the normal and abnormal physiology of the vagina, and especially on the treatment of vaginal infections, he came to the conclusion that the infected vagina in most instances must be treated during the menstrual flow, because it is during this period that these vaginal pathogens grow and multiply. This investigator has experimentally inoculated *Trichomonas vaginalis* into the vagina of charity clinical patients many times and observed that the trichomonads did not grow and multiply *until the patient menstruated.* It was also observed that during and right after each menstrual period, in these inoculated patients, that the number of trichomonads increased, but between each menstrual flow, the number decreased. It was also observed that it was not until there were a large number of trichomonads after the occurrence of several menstrual periods that signs and symptoms were produced or complained of.

This writer has also treated over 10,000 women (charity and private cases) during menstrual flow with vaginal infections during the past 25 years. He has observed many vaginal infections disappear, which would not disappear until after these cases were treated *during the actual menstrual flow.* This has been found to be the case in *Trichomonas vaginalis*, *Candida albicans* and most all vaginal infections.

It was during this 25 years that this investigator, who has used many different kinds of medication in the vagina during menstrual flow that he came to discover an entirely new approach to the "woman's personal hygiene."

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*From the Obstetrical and Gynecological Research Institute, Houston 4, Texas.

It has been commonly observed during the menstrual flow that the internal tampon and/or the external pads are not the answer to the elimination of the blood that comes from the uterus into the vagina.

The first important menstrual protection device used during the menstrual flow was the external pad, but this only disposed of the menstrual blood after it had traveled the entire length of the vaginal canal and become contaminated with the billions of bacteria in the vagina and had been acted on by the vaginal enzymes, and after it had reached the perineum where there are still more micro-organisms and contaminated perspiration. The vaginal bacteria causes putrefaction, odor, etc., before it is absorbed into and onto the external pad or pads. Even after the menstrual blood is absorbed onto and into the external pad, the bacterial and enzyme decomposition still goes on.

The next important advancement in the disposal of the menstrual flow was the internal tampon, on which this investigator did a great deal of research over the years and has written several papers on it. This investigator showed that it is not harmful.

The internal tampon was an advance over the external pad for the disposal of the menstrual blood because some of the blood was absorbed as it came out of the uterus into the vaginal canal. It was soon observed that the internal tampon not only absorbed the menstrual blood, but that the absorbed menstrual blood was always loaded with many kinds and shapes of pathogenic and non-pathogenic vaginal micro-organisms; that the abnormal vaginal micro-organism grew in this serum and blood in and on the internal tampon, and that during their metabolism of this menstrual blood, they produced a highly buffered alkaline pH which greatly favored the growth of all vaginal pathogens.

It was also observed that there is not enough absorption of the menstrual blood by the internal tampons, so that the menstrual blood runs down the internal tampon and on down the tampon's string allowing blood and serum to drip off of the end of the string. It was also noted that the string is almost always found in the area between the buttocks and extending to the anus. Here the string is contaminated with fecal matter and more mico-organisms which also contaminate the vaginal canal. The string also is almost always soaked with perspiration from the anal and perineal regions which are always loaded with pathogenic and non-pathogenic micro-organisms. These micro-organisms also gain entrance into the vaginal canal. The user also contaminates her hand with the bacteria that are on this string. Many women open the labia and fold up this string and place it just within the introitus where it absorbs secretion from this region and aids in contaminating the vagina.

This investigator has been conducting a "Menstrual Disorder Clinic" for the past 22 years and has come to realize that someone in the medical field should try to come to the aid of these women, who should have some improvement for the handling of their menstrual flow, since the external pad is not the complete answer and the internal tampon is only a very small partial answer. Many women have told me when I ask them to get on the table, that they can not, because "the curse was on," their way of telling me that they were menstruating. To many women the menstrual flow is a very troublesome thing and anything that can be done to eliminate it would be gladly accepted. Patients who have used this new method have been appreciative.

With the above in mind, and after seeing thousands of women during their menstrual flow with menstrual blood running down their legs and thighs, all over their perineum and even on their underclothing, this investigator set out to try to find out something that might be labeled at least a small advancement in the handling of the menstrual blood.

Electronic pH Recordings of the Vagina, the Internal Tampon, and the External Pads During the Menstrual Flow

In previous studies, this investigator has reported his research on the pH, glycogen content of the vaginal epithelial walls, the bacterial flora of the vaginal secretion, and the vaginal wall.

The normal vaginal pH was first recorded by doing pHs on virgins of all ages while they were in the charity hospital for non-gynecologic surgery. Also, with the advent of the very thin, long vaginal pH electrode, this writer can now easily determine the vaginal pH in virgins in the office. The normal vaginal pH was found to be between pH 3.5 to 4.2. In some cases, vaginal pH has been recorded as low as pH 3.0.

The vaginal walls' pHs were also recorded just before, during and right after the menstrual flow. It was found that the pH changed, radically, to pH 7.2 to 8.0, which means that the vagina becomes 10,000 times *less acid* during the menstrual flow than the non-menstrual vagina. The problem here was, how one might lower this highly alkaline vaginal pH back to its normal pH or even below normal pH during the menstrual flow.

*The New Low pH Powder and Tablets**

In the Obstetrical and Gynecological Research Institute it has been discovered that by adding vaginal adhesives to five or more non-toxic acids, the resulting pH will be 1.0 to 2.8 to 2.2. At this low pH, menstrual blood is changed into a fine, dry, non-sticky, inert, non-toxic sterile powder which is apparently metabolized in the vagina by the enzymes into harmless chemicals which are reabsorbed into the general circulation. The acid hemoglobin salts are reabsorbed into the body and the iron is possibly utilized by the reticulo-endothelial system to produce more hemoglobin in the formation of more red blood cells.

The above assumption is based on the fact that the powder which is instilled into the vagina and mixed with the menstrual blood does not all seep out of the vagina, but appears to be absorbed from the vagina through the vaginal walls, into the general circulation. The adhesives prevent the leakage or loss of the new low pH powder from the vaginal canal.

On over 200 blood agar culture plates it has been found that at such a low pH there was no bacterial growth, nor did the odiferous menstrual blood within the vagina deteriorate.

The vaginal walls containing enzymes and vitamins which metabolize the menstrual blood, being a very absorptive organ at low acid pH, absorbs some of the changed menstrual blood back into the general circulation.

Method of Eliminating the Menstrual Blood With the New Low pH Powder and Tablets

Women who could tell fairly accurately when their menstruation was to begin were told to fill the Dr. Barnes-Mueller or the Comatic vaginal applicator full of the powder, and then insert the glass plunger or the plastic plunger all the way back in the vagina as far as it will go and then push the plunger so that all the powder is deposited deep in the vagina around the cervix. The first applicator-full will cover all of the cervix. Then another and another applicator-full is instilled into the vagina until the vaginal canal is completely filled. Then one to three new low pH tablets* are inserted into the powder within the vagina.

No vaginal packs or introital pads are necessary, since the presence in the powder of new vaginal adhesives holds the medication within the vagina, thereby keeping the powder from leaking from the vagina.

Those women who can not tell when they are going to menstruate, were told to fill the vagina full of the powder and tablets after the menstrual blood is felt on the perineum, or running down the legs or moistness detected on their underclothing. The same method as given above for instilling the powder and tablets is used. These women can keep a daily basal temperature chart and a written record of the menstrual days each month. From this chart, the patient should be able to tell when next she is going to menstruate. If she can tell within one or two days before menstruation, she then can fill her vagina with this powder and tablets before the flow starts.

If the menstrual cycle has already started, and the menses are flowing freely, the patient is instructed to take a warm water douche (never a cold douche), in a suppine position in the bathtub. The perineum is then dried with a towel, and then, with a finger protected by the towel, she is told to dry as far up in the vagina as she can reach. Then the powder and tablets are placed as given above.

A small amount of lubricant is placed around the tip of the Barnes-Muller or Comatic vaginal applicator before it is inserted into the vagina. The lubricant makes the insertion of the applicator easier.

Daily one to three applicators-full of the powder is inserted deep in the vagina. Each woman will have to discover for herself the amount of powder necessary to keep the menstrual blood changed into a dry, fine powder. It has been found that one tablespoonful of the powder will change 10 teaspoonsful of menstrual blood into a fine, dry powder.

If the woman must still wear an external pad, she is instructed to open it and place an excessive amount of the powder between *each layer* and then fold it back in place and wear in position over the perineum. Then the napkin is pushed away from the perineum and the area between the opened labia is filled with the new low pH powder and then the pad is placed in the normal position. This method is used so that any menstrual blood that escapes to the vaginal opening first meets the new low pH powder and is changed into a dry, fine powder before it reaches the pad so it may destroy any micro-organisms that are present within the menstrual blood. This way the pad is seldom contaminated and therefore seldom needs to be changed. All odors and gases are eliminated by this powder.

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*Trimagill. S. E. Massengill & Co., Bristol, Tennessee.

If any menstrual blood ever reaches the skin of the perineum, it is no longer washed off with a wet towel or rag, but an excessive amount of the powder is blown over and rubbed into the blood. This blood is changed into a fine, dry powder which is no longer blood and no longer sticky, but can be easily dusted off the skin into the commode or onto the floor.

Case Reports

For the past two years this investigator has been instructing his private patients how to use this new method for menstrual hygiene. Over 200 patients are now using this powder and tablets for their menstrual flow.

Women who can use internal tampons during the menstrual flow can use this powder and tablets with even more ease and beneficial results. This powder and tablets should replace the internal tampon entirely. Many women who do not flow too profusely and can not use the internal tampon, can use the powder and tablets instead of the external pad.

Those who menstruate profusely can use the powder and tablets in the vagina, and between each layer of the napkin and on and over the labia. In these women, powder is also used between the napkin in place and the area between the opened labia. In those women who menstruate profusely, more and more powder will have to be placed between the napkin in place and the libia so that as the blood comes from the vagina, it meets the powder and is changed into a fine, dry salt. If the woman uses enough powder, then the menstrual blood never reaches the napkin so the napkin does not have to be changed so often. This powder eliminates all perineal odors and all menstrual odors.

The physician may fill the vagina just before each menstrual flow or the patient may use the diapragm method, whereby a well-fitted diaphragm is inserted just before menstruation and this diaphragm filled with four to six applicators full of low pH powder and four to six low pH tablets. As menstrual blood comes in contact with low pH medication it is changed into a very small amount of fine dry powder. Patient changes diaphragm as often as needed.

Conclusion and Discussion

There is a real need for an improvement of the older methods used to eliminate the waste products of menstrutation. The external pad and the internal tampon fail to absorb the blood efficiently as it comes from the cervical canal into the vagina. Even if the internal tampon meets the blood at the cervical canal, it fails to change the blood or to prevent the blood from undergoing putrefaction with resultant odor. Both the external pad and the internal tampon allow the blood to purify, resulting in a higher alkalinity of the vagina. This method also does not inhibit the growth of non-pathogenic and pathogenic vaginal micro-organisms, but favors their growth, a fact which can be shown by the pH of 7.1 to 7.3 of the menstrual blood as it comes out of the cervical canal. After this blood has been in the vagina and in and on the tampon, the pH is 7.6 or even as high as pH 8.5. This indicates that the blood has undergone marked deteriorating changes.

The new female hygiene method not only keeps the vaginal pH normal, it also changes the menstrual blood into other chemicals which are partially re-absorbed back into the system, and may be utilized again in the making of new, red blood cells; it also makes the menstrual blood sterile at a pH of 2.0 to 2.5. At this pH there is no burning or irritation.

In this new method of female hygiene, vaginal adhesives cause the powder and tablets to adhere to the vaginal walls and thus eliminates the leakage of the powder and tablets from the vagina. These adhesives also eliminate vaginal and introital packs and perineal pads.

It is about time that something better is brought out for female personal hygiene during the menstrual flow.

Such a new and improved method is presented here.

There are now three ways in which a woman can dispose of her menstrual flow, external pad, internal tampon, and by using the new, low pH powder.

Note: (1) Comatic Laboratory, 2819 Portsmouth, Houston, Tex., makes a plastic vaginal powder applicator. This applicator is very reasonable in price and will not break.

(2) Barnes-Mueller glass vaginal powder applicator is made by Scientific Glass Blowing Co., 5510 Lawndale, Houston, Tex.

Some patients prefer glass and some prefer the plastic vaginal applicator. The patient picks the one she wishes.

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PRINCIPLES IN THE SURGICAL MANAGEMENT OF MASS CASUALTIES

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MANKIND has always been plagued by natural disasters which have produced large numbers of injured and dead. To these have been added the casualty-producing capabilities of the atom bomb and the thermonuclear weapon, so that now we may be faced with a problem which for sheer magnitude is totally new in the annals of mankind. For the first time a country at war may visit upon its enemies thousands or millions of simultaneously generated casualties, thus creating a great disparity between numbers of wounded and numbers of professional personnel available for providing treatment. The destruction produced by themonuclear weapons will probably disrupt lines of communication, transportation, and electrical power for days, and perhaps weeks, and will compound the disproportion between numbers of casualties and medical capabilities. This will render more difficult the mobilization of medical personnel. In addition, in the event of a thermonuclear attack, it is felt that not one or two strategic targets will be chosen for destruction but that, instead, many throughout the country will be struck simultaneously. Such a situation will make it necessary that each industrial complex handle its own wounded and dead with facilities and personnel available in the immediate area. In the event of a ground burst, peristent radioactivity in the area of destruction may complicate and render hazardous all attempts at rescue or first aid. If we add to all of the above the fact that necessarily there will be a shortage of hospital beds and stockpiles of supplies, we have presented a problem which can be staggering in its magnitude to the uninitiated.

The Problem

The medical management of large numbers of sick or injured, whether they result from epidemic disease, combat, or disaster, involves the establishment of an organization that takes into consideration every essential of proper care. This orderly process of medical management insures that wherever possible each patient will receive treatment in proportion to his degree of morbidity and disability and that under no circumstances will the lives of the many be jeopardized by the medical needs of the one or the few. To insure proper functioning, it is essential that this organization be established and tested prior to the disaster to determine its capability for carrying out its stated function when required to do so.

The initial management of the injured en masse is a surgical problem, which entails the sorting of casualties to determine priority for treatment, evacuation, and return to duty; it entails the emergency treatment of these wounded in order to save life and limb; it entails the surgical treatment of those injured requiring operation, and it entails the postoperative management of those casualties submitted to surgery. Necessarily, with large numbers of injured, each phase of care consumes a considerable period of time, so that, even with the best organization, a considerable time lag between wounding and treatment will ensue. This results in increased morbidity and mortality. To illustrate: An atom bomb dropped on city X, with a population of 30,000, results in 14,583 injured. A census of the area reveals 60 physicians (one per 500 population) who can be mobilized to care for these casualties. On the basis that one sorting team, consisting of about 30 people, can sort and initiate emergency medical treatment for 50 casualties per hour, sorting of these casual-

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Presented at the Second 12th Naval District Symposium
on
"Medical Problems of Modern Warfare and Civil Disaster"
U. S. Naval Radiological Defense Laboratory
San Francisco 24, California
June 19, 1958
"AMA Arch. Surg. – Ziperman – July, 1958."

ties would require 291 hours. If eight sorting teams were used, this could be reduced to 37 hours. Of these 14,583 injured, by eliminating from consideration those who require only domiciliary care and those with minor wounds who can be returned to duty after necessary first aid is accomplished, it is found after sorting that 6,450 require hospitalization and surgical treatment. Assuming that a surgical team can perform an average of 10.5 surgical procedures per 24 hours (this is higher than average for a combat zone), then to accomplish this surgery in 24 hours would require 614 surgeons and 614 anesthetists. With only 60 physicians of all types in the area, and assuming that 45 will perform surgery while 15 give anesthesia, it would take 13.6 days to operate upon all of the casualties requiring surgery. The time required to sort and operate upon 14,583 injured with the physicians available in the area is thus 15-plus days.

What is the added cost in mortality from this delay in surgery? In Korea, where almost all casualties could be operated upon within 24 hours of the time of wounding, the mortality rate was 2.4 per cent. This mortality percentage as applied to our 14,583 casualties would result in 349 deaths. If we assume that delay in treatment would produce as much as 17 per cent mortality, as in the Crimean war, where treatment was relatively noneffective in saving life, an additional 2,130, or a total of 2,479, casualties would die.

It becomes obvious from the problem outlined above that no easy solution is possible. A good deal of prior planning and preset organization, geared and trained in what we consider to be the essentials of proper management of masses of injured, is an essential. How shall we plan and train such an organization? Is there anything in our country's past experience which can serve as a base on which such organization can be built? To build, to plan, to train in this fashion requires that wherever possible, theory and theoretical thinking be subordinated to solid, indisputable fact. Just such a body of fact and evidence based on the experiences of the military medical services in past wars is available for military, as well as civilian, use. True, the problem is not quite the same, since we have never before experienced either great masses of simultaneously generated casualties, or a large disproportion between numbers of casualties and the number of physicians available for treatment. However, an organization which can and has handled as many as several thousand casualties per day so efficiently as to reduce the mortality rate among the wounded in action to the 4.5 per cent of World War II and the 2.4 per cent of the Korean conflict deserves analysis.

A Solution

SORTING: Sorting is the procedure by means of which the sick and wounded are classified according to type and urgency of conditions presented so that they can be properly routed to medical installations appropriately situated and equipped for their care. It is a continous procedure throughout the treatment chain and must be practiced in each installation by the most mature surgeon available. To achieve maximum effectiveness, sorting must be a flexible procedure, which not only takes into consideration the over-all disaster picture or tactical situation, but also considers changes in local medical capabilities which may alter the criteria for return to duty and the priorities for treatment and evacuation.

ESTABLISHMENT OF PRIORITIES: As mentioned above, sorting has as its objective the organization of large numbers of casualties so that priorities for treatment, evacuation, and return to duty may be more easily established. This system was evolved by experience through several wars. At the present time we pride ourselves on the fact that by its means no casualty is ever denied treatment, that treatment is usually commensurate with severity of injury and quality and number of facilities and personnel available, that time lag between wounding and the institution of therapy is reduced to a minimum, and that, because of its efficiency, we can accomplish the greatest good for the largest number. In past wars, as well as in most disasters, the concept of the establishment of priorities was based on an unfailing source of supplies for treatment, and little or no disproportion between numbers of casualties and quantity of medical personnel available for treatment. In practice, this has resulted in priorities for treatment usually being established on the basis of wound severity, so that the most severely wounded enjoys the highest, and the least severely wounded the lowest priority. Prior planning for the care of mass casualties due to atomic disasters makes it evident that some modification of our priority system must be established in order to avoid disservice to the many in favor of the few because of limited treatment facilities, inadequate supplies, and lack of medical personnel. Such a modification provides for all injured to be divided into four groups:

1. Casualties requiring minimal treatment:
   (a) Those who may be returned to duty.
      (1) Small lacerations or contusions.
      (2) Simple fractures of small bones.
      (3) Second-degree burns of less than 10 per cent extent, but not involving face or hands.
      (4) Acute whole-body ionizing radiation dosage of 100-150 *rem* (Roentgen equivalent, mammal).
   (b) Noneffective persons who require domiciliary care:
      (1) Disabling minor fractures.
      (2) Burns of face or hands which interfere with the person's ability to care for himself.
      (3) Moderate neuropsychiatric disorders.
      (4) Acute whole-body ionizing radiation dosage of 150 or less *rem* in the presence of early symptoms.

These casualties truly have no priority for treatment, but in practice will receive their treatment early. Ordinarily, their wounds are of such a nature that the treatment they receive while being sorted is all the therapy that they require, and they can then be returned to duty or remanded to domicilary care.

2. Casualties requiring immediate care:
   (a) Those with hemorrhage from an easily accessible site.
   (b) Those with rapidly correctible mechanical respiratory defects.
   (c) Those with severe crushing wounds of extremities.
   (d) Those with incomplete amputations.
   (e) Those with severe lacerations involving open fractures of major bones.
   (f) Those with severe burns of the face and upper respiratory tract necessitating tracheotomy.

The casualties in Group 2 will enjoy the highest priority for surgical treatment because a relatively short procedure will suffice to save life. More definitive surgery can then be delayed to a later date, accepting infection as the price of this delay.

3. Casualties whose surgical treatment may be delayed without immediate jeopardy to life:
   (a) Those with simple fractures of major bones.
   (b) Those with moderate lacerations without extensive bleeding.
   (c) Those with second-degree burns of 10 per cent to 40 per cent and third-degree burns of 10 per cent to 30 per cent (after body fluids have been stabilized.)
   (d) Those with noncritical central nervous system injuries.

This group is composed of casualties, a delay in whose treatment will probably lead to infection, but whose lives will not otherwise be jeopardized by delay. The amount of delay between wounding and surgery for this group depends on the total number of casualties with higher priorities who need treatment and the number of professional personnel available to institute surgical treatment.

4. Casualties whose therapy will be expectant:
   (a) Those with critical injuries of the central nervous system or respiratory system.
   (b) Those with multiple severe injuries critical in nature.
   (c) Those with penetrating or perforating abdominal wounds.
   (d) Those with severe burns of large areas (40 per cent or above).
   (e) Those with established lethal or supralethal doses of total body radiation.

The expectant treatment for Group 4 casualties will not be one of masterful neglect but will, instead, consist of that resuscitation and emergency medical treatment which the available facilities, total supplies, and number of professional personnel permit. Theirs will, however, be the lowest priority for surgery because the operative procedures required are lengthy and technically complicated, so that an operative procedure on one of these casualties would theoretically jeopardize the lives of several casualties in other priority groups. Increased loss of life in this group is accepted as a necessary consequence of this low priority for surgery.

TREATMENT CONSIDERATIONS: Any early treatment given to the victims of disaster should be directed toward saving life and limb. Additionally, every effort must be made to insure that physical deterioration is arrested or prevented in the interval between the institution of emergency medical treatment and definitive surgery. As is true during conventional warfare and natural disasters, the extent of treatment given early after nuclear bombardment will depend upon the number and types of injured and medical capabilities in regard to personnel, supplies, and equipment. Where these capabilities are limited, only emergency medical care may be possible, so that definitive care may have to be delayed. Because of the magnitude of the casualty load, any medical installation located beyond the perimeter of destruction, but close to the site of disaster, may have to provide emergency medical treatment for a period of days, even though this is thought of as primarily a function of aid stations. The provision of this type of care may thus preclude, or at least limit, the amount of definitive treatment which can be provided early. With the congregation of huge masses of casualties in a disaster zone, or when medical installations have been wiped out by the detonation, emergency treatment facilities will have to be established proximate to the site. These can provide lifesaving treatment of maximal effectiveness because the physical deterioration incident to the rigors of travel in untreated casualties will thus be avoided. As in conventional warfare, the danger to medical personnel inherent in close-in medical support will have to be weighed against the lifesaving potentialities of these installations.

FIRST AID AND RESCUE: During past wars, first aid and rescue have been functions of the medical service, carried out by enlisted men trained to perform these procedures. In past, relatively limited disasters, they have been performed by well-trained police, firemen, and Red Cross workers, assisted by willing but untrained volunteers. Because of the huge number of injured anticipated in the event of thermonuclear disaster, it will become necessary for these functions to be assumed mostly by volunteers. If they are to function with maximal efficiency and produce minimal mortality, they will have to be trained. Their use will avoid further dissipating already overtaxed medical capabilities by permitting all medical and auxiliary medical personnel to concentrate on the performance of emergency medical procedures. With adequate training in first aid, self-aid, and buddy aid, physical deterioration and death can be held to a minimum until medical help can be obtained. These first-aid measures will consist essentially of bandaging and splinting of those minimally wounded, who can then be returned to duty so that they may aid either in fighting an enemy, or in the care of more seriously injured. Directed toward the severely wounded, these measures may consist not only of bandaging and splinting, but also of control of hemorrhage, correction of certain respiratory defects, and alleviation of pain. In this group, physical deterioration will thus be prevented in a considerable percentage of casualties until they can be evacuated to where medical help is available. Obviously, the number of tactical military personnel permitted to devote their time to this function will depend on the military situation and on the commander's need and ability to carry out tactical activity. On the other hand, any tactical organization which neglects this training in first aid for non-medical soldiers may condemn itself to failure, for, with present-day potentialities for the mass production of casualties, this ability of an organization to bind its own wounds may be the factor which can mean the difference between victory and defeat.

EMERGENCY MEDICAL TREATMENT: Emergency medical treatment is concerned with the performance by medical personnel of those procedures which save life and limb or prevent clinical deterioration of the injured. These procedures are directed toward the resuscitation of the casualty whose wound severity is such that active effort is required to ameliorate or stop the specific dynamic action of the injury. They will consist of the treatment of shock and the performance of certain essential surgical procedures. The treatment of shock among the wounded consists mainly of fluid replacement. When available, whole-blood and plasma expanders, such as plasma, serum albumin, and Dextran, should be used when indicated. The use of large amounts of expanders per casulty is not without danger. None of them provides any oxygen-carrying capacity, so that transfusions of more than 1,500-2,000 cc., may be deleterious to the recovery of the patient. Pool plasma, when used in Korea, was responsible for serum hepatitis in 20 per cent to 25 per cent of all recipients. Dextran causes a bleeding tendency in a significant number of wounded. During the emergency period of mass-casualty management, the available blood and plasma-volume expanders must be reserved for those patients in the immediate and delayed treatment groups who may benefit most from the available fluids. The highest priority for fluid replacement should be reserved for those casualties in whom bleeding is controlled, for this provides the most profitable utilization of these substances and conserves the available fluids.

In all probability, intravenous fluids and equipment will not be readily available. Water by mouth or water reinforced with electrolytes (salt and soda) may be the only supporting fluids available. Hypodermoclysis and proctoclysis, which are simple in application, safe, and relatively effective, may have to be used in lieu of intravenous therapy. Whenever possible, those injured with burns of less than 20 per cent extent should receive oral fluids. Those persons with burns of 20 per cent to 40 per cent extent should receive a high priority for parenteral fluids, provided they cannot tolerate oral fluids.

Essential surgical procedures are those which are lifesaving if performed early, and, as such, may consist of tracheotomies for respiratory obstruction, the application of occlusive dressings for sucking chest wounds, thoracenteses for the thoracic-wounded with respiratory distress, the relief of tension pneumothorax by means of an intercostal needle and flutter valve, the completion of partial amputations, the splinting of major fractures, and the reinforcement of dresssings where indicated. Whenever possible, vascular injuries of the extremities should be treated with pressure dressings. Tourniquets should be used only as a last resort, for in a mass-casualty situation, their use accepts probable amputation.

DEFINITIVE TREATMENT: Definitive medical care is concerned with the institution of indicated specific surgical procedures in keeping with the priority of treatment established. Because of the large numbers of casualties and the relatively limited medical capabilities, certain short cuts and compromises in therapy may have to be established. It must be understood and accepted in advance that these may produce an increase in morbidity, but little, if any, increase in mortality. They are desirable only insofar as they permit the definitive care of more casualties per unit of time. Among these may be the necessity for ligation of major vessels rather than their definitive suture repair. Implicit in this decision is the knowledge that with its application we can prognosticate an amputation rate of 49 per cent, as in World War II, rather than the 17 per cent which resulted after the suture repairs of the Korean conflict. Splints may have to serve for definitive alignment of closed fractures, with full anticipation of an increase in malunions and nonunions, which will cause an increase in morbidity. This can be corrected at a later date when time permits. The tacking of facial wounds through easily identified structures may be a substitute for early coaptation of wound edges, provided we appreciate the additional care imposed by oral fistulae resulting from this type of surgical technique. At the earliest possible time, cosmetic repair will have to be definitely accomplished.

Because more than 50 per cent of all missile trauma is anticipated to involve the extremities, and because lack of proper surgical care is likely to lead to gas gangrene and other life- and limb-jeopardizing infections in a large percentage of cases, it is felt that debridement of extremity wounds is likely to comprise a large part of specific treatment. The cardinal principles of this therapy are as follows:

1. Incisions should be made in the long axis of the extremity except where wounds are over a flexion crease.
2. The skin incision should be long enough to permit adequate exposure of the underlying devitalized tissue.
3. Only a minimal amount of skin should be excised.
4. The fascia must be opened to the full extent of the skin incision.
5. Excision of devitalized muscle is contingent upon (a) lack of contractility; (b) color change; (c) lack of bleeding, and (d) change in consistency.
6. Hemostasis should be complete.
7. All debris in the wound depth should be flushed out with saline.
8. Wounds should not be sutured primarily. Instead, where possible, delayed primary closure in four to six days should be practiced. (Associated burns and radiation injuries may complicate or delay attempts at closure.)
9. Dressings should be applied firmly but not packed into the wounds.
10. Open fractures should be similarly treated and immobilized. Metallic fixation should be avoided. In joint injuries, only the capsule should be closed.

Antibiotics, Thoracic Wounds, and Burns

Proper application of these principles within 24 hours of wounding should serve to minimize infection and morbidity. With delay, the incidence of gas gangrene, tetanus, and other infections will rise. Antibiotics, if available, should be given early to most injured. Under no circumstances can they be considered as a substitute for surgical treatment. They should serve, instead, as a means of delaying the invasive stage of wound infection and thus render less dangerous to the casualty the expected delay in treatment. Only one, or at most two, potent broad-spectrum antibiotics should be used for this purpose, and their use should be continued for at least five days. The patient's clinical condition and availability of supplies will determine the agent employed, the route of administration, and the dosage and duration of treatment. Regardless of the antibiotic employed, resistant bacterial strains will develop. This will necessitate the utilization of additional antibiotics at a later date. In spite of delay in debridement, toxoid should serve to minimize the incidence of tetanus for those casualties previously actively immunized. A single stimulating dose will suffice. For those casualties not actively immunized, tetanus antitoxin will be required.

Without exploration, the extent and seriousness of injuries to the abdomen, thorax, and central nervous system are difficult to determine because simple wounds of entrance frequently lead to extensive damage, requiring skill and time to repair. As was demonstrated in Korea, in 90 per cent of the cases thoracic wounds responded well to thoracentesis. Those casualties with perforations of the mediastinum, those with rapid accumulation of hemothorax or pneumothorax after aspiration, and those with cardiac tamponade not responsive to paracentesis are in need of extensive thoracic surgery. Craniotomy, laminectomy, thoracotomy, laparotomy are time-consuming. With huge numbers of casualties, these may have to be deferred initially, so that primary attention may be directed to the many casualties with a reasonable chance for survival. When available, however, treatment modalities, such as blood transfusion, intubation, antibiotics, and Wangensteen suction, should not be denied to these severely wounded.

In a disaster, the number of casualties with burns and their severity will vary with circumstances. In a thermonuclear disaster, a significant number of all living injured may be burned. These injuries may vary in severity from flash burns of exposed body surfaces to almost total-body burns. This severity will depend upon the size of the weapon used, the position of the patient in relation to ground zero, and the combustibility of the environment. With huge numbers of burn casualties, dressings will be in short supply, so that the open-air treatment of most burns must prevail. Those casualties with burns of less than 10 per cent extent who can return to duty may have dressings applied, for this would enable them to be gainfully employed. The local application of a bland ointment may be effective in alleviating pain. Since burns almost inevitably become infected, the use of a broad-spectrum antibiotic should be anticipated. Available fluids should be given freely and, where possible, exclusively by mouth, in the form of Moyer's solution (3-4 gm. NaCl and 1.5-2 gm. $NaHCO^3$ per liter). This therapy should conform with any acceptable formula based on the percentage of total body surface burned. The rate of administration is regulated by urinary output, which should be maintained at 30 to 60 cc. per hour. Initially, the local treatment of the burned area should consist of gentle cleansing and trimming of loose-hanging skin tags. Avoidance of hard scrubbing and debridement of adherent skin may avert the danger of precipitating shock.

Radiation, Anesthetics, and Analgesics

Because of the difficulties inherent in determining the amount of total-body radiation received, the medical care of these casualties may depend upon symptomatology and clinical findings. Here it is important to remember that the shorter the time interval between exposure and the onset of symptoms, the graver is the prognosis. Lacking specific curative or preventive therapy, this type of injury presents no medical emergency. It may even be necessary to use the less incapacitated of these casualties to help in the care of the other, more severely injured. When indicated, the active treatment of these casualties is directed toward restoring to normal the fluid and electrolyte balance disturbed by the resultant vomiting and diarrhea. Adequate nutrition and rest, the restoration of a hemoglobin level of 10 gm. per 100 cc., and the control of infection with antibiotics are all considerations in this symptomatic treatment. Because radiation produces a decrease in formed blood elements by its action on the hematopoietic system, wound healing may be markedly altered. This may be coupled with fluid and electrolyte imbalance incident to gastorintestinal damage by exposure to radiation. These factors may dictate changes in the pre- and post-operative management of burned and mechanically wounded casualties with superimposed radiation injuries.

Anesthetics and analgesics play a vital role in the management of mass casualties. The anesthetic employed will depend on the availability of agents and of personnel qualified in its use. The anticipated shortage of anesthetists will probably result in one qualified person caring for more than one patient at a time. Where indicated, it may be necessary for one anesthesiologist to supervise three or four technicians giving anesthesia simultaneously. In such a situation, and with the absence of needed equipment, only open-drop ether and chloroform anesthesia may be used. Local and regional anethesia may be prevalent. In such a situation, it is not wise to consider utilizing spinal anesthesia, because of its capacity for producing shock in already severely traumatized casualties. Thiopental (Pentothal) sodium is an excellent agent for the production of anethesia when the operative procedure to be performed is short and the casualty is not likely to go into shock.

The cardinal principle in the use of analgesics is to use the smallest dose of the mildest agent needed to relieve pain. If possible, oral rather than parenteral agents should be employed, so as to conserve on the need for needles and syringes. Where opiates and other more powerful analgesics are required, the intravenous route is preferable to the intramuscular one, especially for casualties in shock. When the analgesic is administered, the time and size of the dose should be indicated either on the casualty tag or with skin pencil on the casualty himself. Adherence to these principles will serve to reduce the incidence of morphinism.

SUMMARY

1. Thermonuclear warfare has the capability of producing hundreds of thousands or millions of casualties simultaneously.
2. These casualties will consist of (a) those resulting from blast; (b) those resulting from burns; (c) those resulting from nuclear radiation, and (d) those resulting from a combination of any or all of the above.
3. There will be a huge disparity between numbers of casualties and medical capabilities.
4. Care of mass casualties should be based on the proposition that we must do the greatest good for the largest number at the right time and in the right place.
5. Sorting is the key to the management of large numbers of casualties, for it is directed toward establishing criteria for return to duty, for priority for treatment, and for priority for evacuation.
6. The treatment categories in a mass casualty situation will be: (a) minimal treatment; (b) immediate treatment; (c) delayed treatment, and (d) expectant treatment.
7. The treatment of casualties may be divided into (a) first aid and rescue; (b) emergency medical treatment, and (c) definitive surgical treatment.
8. All treatment will be modified by short cuts and compromises to permit caring for a large number of casualties per unit of time.

(Continued from Page 604)

Back in 1859, when your organization was founded, our hospitals were, all too frequently, places that individuals did their best to avoid — for their chances of coming out alive were not encouraging. As for the unfortunates with contagious illnesses, they were merely sent into isolation so that they would not endanger the lives of other citizens.

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(Continued on Page 622)

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1. Innerfield, I.: Clinical report cited with permission
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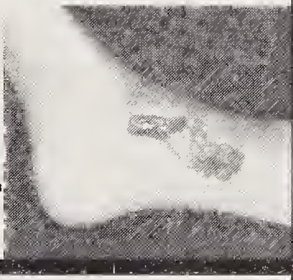

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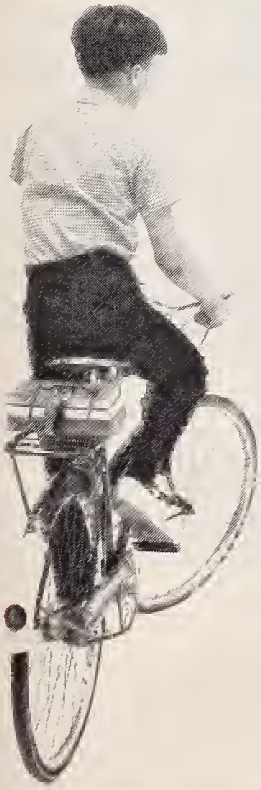

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Current Trends in Medical Education

THE ESTABLISHMENT OF A MEDICAL SCHOOL*

Vernon W. Lippard, M.D.
Dean of the medical facility of Yale University
Medical School

IT WAS good of you to take a Connecticut Yankee into your council. I promise not to sell you any wooden nutmegs. My only concern is that our country face squarely the reality that our population is increasing at an amazing rate and that we not be caught short in the provision of essential services. Many such services are outside the realm of our interests but there is one which *is* our immediate concern and responsibility, i.e., the production of competent physicians in numbers sufficient to meet the demands for medical care and to advance medical science through research.

Suddenly confronted with this problem, several estimates of physician requirements have been projected over the past two years. They have taken into consideration such factors as improvement in transportation and communication, control of infectious diseases by sanitation and immunization and diminution of their severity and duration by use of antibiotics, which would suggest that a smaller ratio of physicians to population may be necessary. Balanced against these factors are the aging of the population and our capacity to treat diseases formerly considered hopeless which tend to increase the demand for physicians' services. In the maze of this controversy, one fact stands out clearly — these trends did not begin yesterday but have been continuous over the past 50 years; yet over that entire period, the ratio of physicians to population has remained almost constant at a level of about 132 per 100,000. There is no reason to believe that good medical service can be provided with fewer.

In order to maintain this ratio, which experience has proved to be necessary, the production of physicians must be accelerated over the next few years. Only a little over a year ago, it was predicted that the population of the United States would reach 220 million by 1975. A few months ago, a commission appointed by the surgeon general of the USPHS was assembled to explore this problem of physician supply and come forward with a definitive plan for its solution, and it was instructed by the census bureau that 16 years from now the population is more likely to reach 235 million. Taking figures as a base, the number of students graduated in 1975 will have to be about 10,500, over 3,000 more than at present, if the existing physician-population ratio is to be maintained. Some of this increase will be taken care of by expansion of existing schools. Other factors may shift the demand a few hundred one way or the other, but the fact remains that several new schools will be needed.

Planning for the Future

In planning for the future, demographic factors other than mere numbers must be considered. One of these factors is population mobidity. Each year, one out of every five families in the United States moves from one community to another, and the predicted movement is toward the West and Southwest. The supply of physicians is a national problem and, economic conditions being favorable, doctors like other people, tend to distribute themselves into areas where they are needed. Nevertheless, there are obvious advantages in having the distribution of medical schools in some general relation to the distribution of population. Thus, if favorable conditions can be created, the establishment of a medical school in this area would appear to be in order. My assignment today is to suggest how you might go about it.

In earlier days, the problem was a simple one. Medical instruction at the University of Virginia was inaugurated in 1825 by the establishment of a chair in anatomy and medicine. At Yale, 150 years ago, one professor was imported and he joined with a chemist and a group of local physicians to form a faculty, and two years after the charter had been granted, instruction was under way. Now the problem is quite different yet the fallacy persists that if a town has 300 or 400 hospital beds scattered around among several independent hospitals and a group of local physicians with no teaching or research experience who think they would like to be professors, the founding of a medical school would be a simple and inexpensive process. If I can make one contribution to your deliberations here today, it would be to dissuade you from planning on such an irrational basis.

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*Presented at the Arizona Medical Association Annual Meeting, May 1959, Chandler, Ariz.

Location

The single factor that I would consider to be of paramount importance in the establishment of a medical school is intimate association with and control by a well established university which has other graduate and professional schools and a reputation of maintaining high educational standards. When such a university is privately endowed, the question of location is seldom a problem. When the university is tax-supported, as most of those establishing medical schools in the future will probably be, location almost invariably becomes a political football and local jealousies, prejudices and selfish interests may play a larger role than educational considerations.

In the rational determination of a location, factors of primary concern should include association with the parent university and availability of clinical material. Other factors being equal, physical proximity and opportunity for close intellectual association with other university disciplines are of major importance. Although some medical schools have survived and will continue to operate independently or in distant relationship to other divisions of their parent universities, I predict that they will be increasingly handicapped over the next century, as medical science becomes more and more closely related to the natural and social sciences. In some states, location of the state university in a rural area, far removed from any density of population, will make location of the medical school on the campus impractical, and another solution may have to be found.

The significance of availability of patients is inescapable and in this regard it is most important to consider future potential as well as existing circumstances. The potential growth of the community which a university hospital may be expected to serve as well as the number of people in it at present is of great importance.

As I mentioned earlier, the existence of scattered small, independent hospitals in a community is of no significance. Rarely, there may be a large city, county or voluntary hospital which can be turned over to the university, but this can seldom be accomplished without considerable trauma, and half-way measures only lead to complications. Unless the university can be given complete responsibility for appointment of staff and a good deal of say about its operation, the affiliation is not likely to be satisfactory.

Busy Years

Location of the medical school having been decided upon, and funds for purchase of land and planning appropriated, a minimum of eight years will have passed before the first student is graduated. At least four of these years will have been spent in planning and construction before the first student can be enrolled. A number of people are going to find these the four busiest years of their lives. Essential to this operation from the very beginning is a competent dean. He will gather around him a small group of people, including a hospital administrator, and will be responsible for working with the university administration and architects in planning the program and facilities. If the school is to be under state auspices, he will have to give a lot of time and thought to the social and economic characteristics and health needs of the community which the school will serve.

With construction of the building for instruction and research in the basic medical sciences under way, his attention will be turned to design of the hospital because that should be in operation by the time the first entering class reaches its second year. Plans for an ordinary hospital will not do because integration of clinical services, both inpatient and outpatient, with facilities for instruction and research at both the clinical and preclinical levels is of great importance.

Faculty

Finally, he will get around to perhaps the toughest job of all, the selection of a faculty. For this task he will need a strong backbone as well as sympathetic understanding of the medical community. Members of the basic medical science departments will, of course, be appointed on a full-time salaried basis like the members of other departments throughout the university. A substantial nucleus of full-time salaried members of the clinical departments is equally essential. These will be more experienced in teaching and research as well as medical care and they will have to be recruited wherever they can be found. Inevitably they will compete with the local profession for prestige as well as patients. Unless the members of the local medical fraternity are prepared to recognize this fact and adapt to it like mature and responsible citizens, the school might better be located elsewhere. Eventually a few of those who are competent, needed for instruction and willing to contribute their services regularly on a part-time, voluntary basis will be appointed to the clinical faculty. However, if the school is well organized, there will not be many such appointments; they will be made on an annual basis and none of them will be honorary. We must recognize the fact that medical schools are educational institutions, not clubs operated for the benefit of their members.

Costs

No state or institution should consider the establishment of a medical school without full realization of the costs of construction and operation. Good planning and a substantial initial investment pay off. The remodeling of an existing hospital and addition of a basic science building is seldom a good long-term investment.

Construction of a building to house the basic science departments, library and administration offices will cost $6 to $8 million. Assuming that the school under consideration is at the beginning to have slightly less than average enrollment, say 80 students per class, it should have at least 400 teaching beds occupied by ward patients or patients of its full-time faculty completely available to the clinical clerks. The cost of such a hospital, including outpatient facilities, will be in the neighborhood of $10 to $12 million. An additional allowance of $1 to $2 million have to be provided for offices and research laboratories of the clinical departments. This all adds up to about $20 million.

These are necessarily rough estimates. They must vary with building costs in various parts of the country, the necessity for air-conditioning and many other factors. The plants of many of the older medical schools, which have expanded over the years and have larger enrollments and extensive research facilities, could not be replaced for twice the amount I have mentioned.

I trust that these estimates of capital expenses will not appear too staggering to the citizens of a state such as Arizona which, due to its limited population, has less extensive financial resources than larger states. All of the schools established in recent years have received aid from the federal government. Matching funds are now available under the health research facilities construction program for building and equipping the areas which will be devoted to research. Hill-Burton appropriations may be applied to construction of a hospital. It is entirely conceivable that within the next year or two, as the urgent need for establishment of more medical schools becomes generally apparent, matching funds for construction of teaching facilities may be appropriated. With intelligent regional planning, adjacent states, such as Arizona and New Mexico, might well consider combining their resources, perhaps with the provision that the state in which the school is not located would have the privilege of withdrawing at such time as it becomes ready to establish a school on its own.

A realistic appraisal of the costs of operation is as important as the estimate for construction. Basic budgets of the preclinical departments could not be less than $500,000. The budgets of clinical departments are more difficult to estimate, as they are dependent upon the extent to which the hospital may participate in the salaries of such departments as radiology, physical medicine and anesthesiology. Furthermore, in one way or another, the full-time members of clinical departments usually contribute to the budgets for their own salaries by caring for limited numbers of referred private patients. To assume that they should do so to the extent of more than 50 per cent, however, is unrealistic and a smaller percentage is more desirable. Including provision for minor alterations of laboratories and replacement of some basic equipment, a maintenance budget of at least $200,000 is inevitable. Administration and library will cost another $100,000. This all adds up to a minimal budget for the medical school alone of not less than $1 million. If other educational programs such as nursing are contemplated, the costs will be greater.

These estimates do not include the cost of research, except as it may be hidden in salaries and other general expenses. A fluid research fund to get new projects underway is a tremendous asset. In this day, however, most medical schools are dependent upon support from federal agencies such as the National Institutes of Health, the National Science Foundation and the Atomic Energy Commission and from voluntary health agencies and foundations for most of the direct costs of research. In some of the older and well established schools, the amount of money entering and leaving their coffers each

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year in support of research from outside sources exceeds their budgets for instruction and basic operation. As research activities increase, the basic budget must be increased proportionally because indirect costs are seldom covered by research grants.

Income from tuition may be expected to balance only a small fraction of expenses; in the average American school only about 13 per cent. The remainder must come from endowment income and gifts or, in the case of state-supported schools, from taxation. No state should consider the establishment of a medical school unless it is prepared to face this fact realistically. Good medical education is expensive and there is no place for medical schools of poor quality which will inevitably produce grade B physicians.

What I have said about operating costs up to this point has left out of consideration any subsidization of the cost of operation of a hospital. This is an unknown quantity and differs greatly with the local situation. One point in this regard, which I cannot emphasize too strongly, is that the expense of hospital operation should not be confused with education. A good university hospital is a tremendous asset to the health and welfare program of a state and the bookkeeping should take this fact into account. Patients occupying private accommodations should be expected to pay their own way, but admission cannot be confined to that group alone. Furthermore, outpatient services, essential for instruction, are never self-supporting.

Where funds for hospital operation are appropriated directly to the medical school or incorporated in the general budget of the university, they are invariably confused, in the minds of the legislators and the public, with the costs of education and the entire university is likely to suffer. This confusion may be avoided if the care of the indigent and medically indigent is charged against health or welfare appropriations. In such cases, the university hospital bills the health or welfare department of the state for the differences between what indigent patients can afford to pay and real costs, and operates on a balanced budget.

In closing, let me emphasize that I would be selling you a wooden nutmeg if I should lead you to believe that for the amounts mentioned a medical school comparable in size and research activity to many of those which have been in operation for a century or even one or two opened within the past few years could be established and operated. I do believe, however, that the need for establishment of several medical schools, under the auspices of universities with sound educational policies, is urgent and that an investment in the neighborhood of $20 million would be adequate to get the program under way. If, after careful study and good advice, you should decide that such a program is feasible in Arizona, it would be launched with the support and best wishes of all those concerned with the future of medical education.

(Continued from Page 615)

water supply systems and vastly extended education. Each of these factors underscores the intimate link between a productive and expanding economy, and high standards of medical and health care.

Like our bodies must be vigorous, so our economy.

In this sense, the relationships between the balanced diet and balanced budget are easily understood. Neither is an end in itself. There are some useless items of food all of us crave and do eat, no matter how unwisely, just as there are always products and services for which we thoughtlessly spend, often to our own detriment. But in each instance we must conduct ourselves with a wary eye on the consequences. Habitual violation of the requirements of a balanced diet can lead to ruined health; deliberately to unbalance the federal budget in time of huge indebtedness and rapidly increasing prosperity can bring about an enfeebled economy. The choice, therefore, is ours, and we must act with clear mind and resolution in either case.

In the management of our governmental activity, one simple need is for judgment, frugality, and restraint.

The federal government can be, with some accuracy, likened to a bank which uses the money deposited by the American people to finance many businesses — some necessary, some not so necessary. In these busineses are involved, in one way or another, all the bank's depositors.

If a bank — in this case the government — should persistently use its funds foolishly, or too lavishly, because of a yielding by its directors to the demands of specially favored or powerful

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A DISCUSSION OF SOME FUNDAMENTALS IN MEDICAL EDUCATION*

By Thomas B. Turner, M.D.
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AS I UNDERSTAND it, two questions underlie the discussions in this symposium: 1. Should Arizona establish a medical school? 2. If so, what kind of medical school should be established? The discussion in this paper is directed primarily to the latter question.

The fundamentals of medical education probably remain largely the same from one era to another. Yet the pattern and content of medical instruction changes: As the preparation of the student differs from time to time and from one country to another; as the health and disease spectrum of a particular area of the world changes; and as special knowledge increases. Moreover, medical education des not exist in a vacuum, but is surrounded and impinged upon by evolutionary changes in society and by the growth of knowledge in general.

It must be recognized that the traditional four-year span of medical school is but one segment of a much longer process. Much of vital importance educationally goes before, much inevitably follows. The medical school years should be considered as the mid-piece of a much longer period. What are some of the basic considerations upon which the medical school curriculum should be constructed? Can we improve the transition periods into and out of this focal middle segment of medical education? Are there ways of better interdigitation of the three important phases in the total formal education of the physician? In discussing these questions, a basic assumption is that the medical school will be an integral part of a university in which graduate study has already been developed.

Education for Medical Practice

One of the first questions a medical school must answer is what kind of product it desires. Since the large majority of those receiving the M.D. degree practice medicine in the traditional sense, should there be any educational concessions to the individual who eventually elects not to practice, but to engage in one of the other manifold activities for which the M.D. degree might qualify him, such as teaching and research, military medicine, or public health in one or another of its many forms. Clearly, society needs both kinds of physicians, and it would be unwise heavily to weight the academic scales against students with scientific or laboratory or administrative leanings, thereby over the long range forcing such individuals into non-medical educational channels.

But I shall go a step further and support the thesis that there is no fundamental conflict at the medical school level between an educational pattern directed to the needs of the future practitioner of medicine and one designed to produce teachers and investigators. Indeed, the distinction between medical schools with academic versus practice orientation are fast disappearing. The good practitioner of today has the same critical outlook as the experimental biologist, and this trend will be accentuated in the future. It is entirely feasible to design a curriculum with sufficient flexibility to permit development of medical students with varying backgrounds, aptitudes, and ultimate objectives.

The Role of Research in Medical Education

Intimately related to the foregoing problem is the question of the role of research in the education of a physician. Certainly the medical student must acquire a fund of information as he pursues his step-wise course to the M.D. degree; but in addition it is of the utmost importance that he should be able to use this knowledge in an orderly, logical and disciplined manner. The student who undertakes an investigative problem under the supervision of a member of the faculty is required to formulate a meaningful question; design a pattern for obtaining pertinent data with economy of time and effort and with due regard for feasible controls; make the necessary observations with the use of whatever technical skills that are indicated; and finally analyze the findings, formulate logical conclusions, and present them in literate English.

Precisely this type of approach, whether made consciously or subconsciously, is the one the good clinician uses in the study of a sick patient. Accurate observations and a disciplined mind are characteristics equally essential to the medical investigator and the medical practitioner.

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*Presented by invitation at the annual meeting of the Arizona Medical Association — May 1, 1959, Chandler, Ariz.

Only by striving to make medicine a scholarly pursuit will this great profession continue to attract the ablest young men and women in competition with fields such as physics and engineering. Such scholarly orientation in no way conflicts with the service responsibilities of medicine, but complements them. The continuing self-education of physicians, in which the medical school can play a key role, will result in more able and more satisfied practitioners of medicine.

Consequently, at Johns Hopkins we have broken away from the lock-step pattern wherein each class marches day after day, month after month through its medical course, and have moved to a curriculum which not only encourages individualization of instruction, but provides the elective time to make this possible. In our revised curriculum, one quarter of each academic year is set aside for elective studies. For example, among a second year class of 75, no less than 60 have already undertaken some investigative problems which they began either last year or this. There are now in the medical school at least 10 students who have dropped out of the regular medical course to do one or more years of special work. Most of these young men and women will not follow an investigative career, but I venture to predict that to most this period will be recalled as a meaningful and rich educational experience.

The Basic Sciences and Medicine

Through the initial efforts of the Council on Medical Education of the American Medical Association which stimulated the epoch-making Flexner report(1), medical schools in the United States and Canada have undergone remarkable evolutionary development during the past half-century. One of the most notable achievements has been the rise in quality of the pre-clinical departments. In many medical schools today, members of the departments of anatomy, biochemistry, physiology, microbiology and pharmacology are working and teaching at a most fundamental level, with much of their work being in the fore-front of the scientific advances of human biology.

Concurrently in many of these same universities, strong departments of biology, chemistry, physics and mathematics have evolved, often on the same campus.

These developments raise two questions: First, have we now an opportunity, during the pre-medical and the pre-clinical years, better to interdigitate the teaching of the sciences basic to medicine? Such integration will not only effect a saving of time to the prospective physician, but may give him a sounder preparation for medical school. It is but a short step from the study of the embryology of the chick to that of the human being. Why separate the two by a span of two to four years? What useful purpose is served by separating comparative and human anatomy so widely in time and space? Do we need the geneticist and the radio-biologist in both the college and the medical school, and if so how do their roles differ in the two segments of the university? These and many similar questions merely emphasize the great community of interest that exists between departments of biology, chemistry and biophysics on the one hand, and the pre-clinical departments of medical schools on the other.

It will be well to consider, too, whether it is wise and economical to have large overlapping departments in the medical school and in another graduate school of the same university. With geographical proximity of the two faculties, could not better utilization of scientific manpower be made? These and similar questions merit consideration in long range planning.

The Liberal Arts and Medicine

In earlier generations, educated men and women were commonly brought up in the classical and humanistic tradition of general education. This is no longer true. Indeed, it is often difficult to characterize the kind of education our present-day medical students have had. Usually it is heavily weighted with science (although the term "science" is unlikely to include the kind of mathematical training that seems so necessary to the understanding of modern cellular biology.) But this is about the only common denominator. A few medical students will have had a good background in history and perhaps even classical literature. A few will be well acquainted with our rich heritage of English literature; but in the fierce competition for entrance to medical school, the student tends too early to concentrate in the

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1. "Medical Education in the United States and Canada" by Abraham Flexner; Bull. No. 4, Carnegie Fdn. for the Advancement of Teaching, 1910.

sciences and hesitate to put his time and energy into rigorous courses in the humanities or the social sciences.

Moreover, once in medical school, the student is so preoccupied with human biology and the medical specialities that it is only with great difficulty that he maintains any interest in literature, or history, or philosophy that he might earlier have cultivated. Thus we have too many medical graduates who are ill-prepared to cope with the great philosophical, social and humanistic problems which eventually confront all physicians and scientists. In my opinion, the medical schools are largely responsible for this situation, and it is they that have an obligation to do something about it.

At Johns Hopkins we are placing greater emphasis on the history and philosophy of science and medicine, and our Department of the History of Medicine is serving not only as an important teaching unit, but as an effective link with the Faculty of Philosophy of the University. Moreover, the Medical Residence Hall which houses both medical students, house officers and some post-doctoral fellows serves as a cultural center where the sciences, the humanities and the social sciences meet, as for example, through informal talks and seminars by prominent individuals outside the field of medicine.

In the revised program of medical education(2) at Johns Hopkins we have gone much further in a formal way in experimenting with real interdigitation of college and medical school education. From among students who have completed two years of college, we shall admit this coming fall about 25 for combined study under the Medical Faculty and the Faculty of Philosophy of the University. These carefully selected students will be residents in the medical school, but will pursue concurrently studies in the sciences and the liberal arts. Chemistry and mathematics will be taught in the medical school while physics and advanced courses in the humanities or social sciences will be taught by the Faculty of Philosophy. The following year they will join, without group distinction, an incoming class of about 50 college graduates and together form the traditional first year class in medicine. Students in the former category must qualify for the A.B. degree at the end of that year before being allowed to proceed in medicine.

The Role of the Two-Year Medical School

The rapidly growing population of the United States has brought increasing pressure for the education of more physicians. Responding to this pressure, most two-year medical schools have been expanded to four-year schools. But the real bottleneck in medical education is in the pre-clinical years because of the lack of qualified teachers in the basic sciences.

Many medical schools in our large centers of population could, with comparative ease and at no great increased cost, accommodate substantially more students in the clinical years than they now do.

It is my opinion, therefore, that the first step in moving to graduate more physicians is to expand the facilities for pre-clinical teaching. As indicated above, there are many universities with science faculties which could readily form the nucleus of a two-year medical school. Here again, great opportunities would be available further to explore interdigitation of the last two years of college and the first two years of medical school.

The Clinical Clerkship

At the other end of the medical school spectrum, opportunities exist for better co-ordination of clinical teaching. There is admittedly much duplication in the practical clinical instruction given during the last year of medical school and that of the internship. The time has come, we believe, to give the last year medical student more responsibility in the care of patients under the immediate supervision of the assistant resident. Such a shift is not merely a matter of definition, (clinical clerk versus intern), but entails the assumption of real responsibility by the student. The result will be acceleration of the maturation process for the medical student and more rapid progress toward the completion of his clinical training.

Again, at Hopkins we are initiating a program in which a portion of each class will be allowed to accelerate in such a manner that the last year of medical school will be spent as an intern in the Johns Hopkins Hospital or some other hospital approved by the faculty. Thus the total time to the residency or assistant residency will be reduced by approximately one year.

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2. A Revised Program of Medical Education — The Johns Hopkins Magazine, Volume 10, number 4, January 1959.

Post-doctoral Training

Almost all young physicians spend two to four years in post-doctoral training in some recognized medical center. At Johns Hopkins, for example, there are some 150 Fellows and an equal number of house officers, all of whom are "learners." Clearly our post-doctoral education responsibilities and opportunities equal those we now have in respect of pre-doctoral education. In my view, there is much that can be done to make these years professionally more rewarding, but that subject is beyond the scope of this paper.

Summary Comments

Let me now emphasize several points which I have alluded to above and which I deem to be of major importance in medical education. First, the real test of a school is the quality of its pre-clinical education, if for no other reason than that the basic science departments are the most difficult to staff with superior and inspiring teachers.

Second, the curriculum must provide sufficient flexibility to permit the student to develop his own professional individuality. Depth of study and active participation in the exciting processes of discovery must be the keynote, not passive learning through lectures and demonstrations. This requires a substantial full-time faculty as well as the active participation of the part-time faculty.

Third, earnest thought should be given to better co-ordination of the pre-medical, medical school and post-doctoral phases of medical education. In the clinical teaching of the future, we shall not be able to rely upon the "free" patient, but inevitably must use private and semi-private patients in order to have access to adequate clinical material for teaching purposes.

Finally, the value of a medical school to a state or region cannot be estimated alone in terms of the number of students it graduates. A high quality modern medical school provides a scientific and professional center of inestimable value not only to the medical profession, but to all citizens. From such a center flows the life blood of prevention and curative medicine. Here is focussed the art of the present and the science of the future. It is unnecessary for me to dwell on the high cost of a modern medical school, but in balancing the cost against its value to all the citizens many considerations, both tangible and intangible, must go into the equation. The dynamic growth of medicine presents many challenges to medical education, and many opportunities. It behooves all of us to approach those problems with an inquiring mind.

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groups of depositors, the result would be exactly the same as in the case of a commercial bank following the same reckless course. The bank would finally go bankrupt, the businesses financed by it would be destroyed, and the depositors would be impoverished. Of course, one advantage enjoyed by the government over a commercial bank is that, when the federal government spends its money foolishly it can, by law, call upon its depositors — all the people — for more and more funds in the form of taxes. Worse, the government can inflate our money. Finally, all prices would go out of sight and everybody would go broke.

We must live within our means if we, as a people, are to prosper. Unless both responsible officials and all our citizens begin to insist that we make significant annual payments against our burdensome national debt, we will weaken the credit of the nation.

The medical profession, as much as any other, has a vital interest in preventing inflation. Certainly it wants to provide its services for a fee within range of what people can reasonably pay.

If the time ever comes when large numbers of our citizens turn primarily to the government for assistance in what ought to remain a private arrangement between doctor and patient, then we shall all have suffered a great loss.

The cost of inflation is not paid in dollars alone, but in increasingly stagnated progress, lost opportunities, and eventually, if unchecked, in lost freedoms for the doctor and patient.

For those who will take the trouble to look, there is no difficulty in seeing the relationship between fiscal responsibility and a successful, meaningful life for all in a climate of freedom. I am confident that you doctors, as community leaders in great urban centers and in the villages and farm areas of America, can do much to promote greater understanding of the importance of this vital relationship.

So I believe that, as you show us how better to preserve our own health, you can do a great

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*Trademark

THE FORM AND FUNCTION OF A SCHOOL OF BASIC MEDICAL SCIENCES

By Walter L. Hard
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Vermillion, S. D.

I SHOULD like to open this discussion with a quotation from a recent publication as follows: "The Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association believe that two-year schools of basic medical science under appropriate circumstances can make now and for the foreseeable future significant contributions to the established goals of medical education in the United States."

Only the future will dictate how important this action may be, but to those of us who have faced the problems of medical education in our local areas where the two-year school has made a significant contribution, this belated recognition is a very heart-warming experience. If then I speak with some feeling on the matter of a two-year school, and I openly admit to prejudice, please temper your judgment of my remarks with the realization that I have been through the days of birth out of wedlock and only recent have become legalized by the bonds of matrimony.

It was not in the too far distant past when these self-same accrediting agencies issued an ultimatum to our school to the effect that medical education could best be served by either the school closing its doors or expanding to a four-year medical school. You may well believe that such a situation was the precipitating factor in creating a very vigorous discussion on the future of medical education in South Dakota. Essentially there were three proposals to discuss. One was to embark on a subsidiziation program essentially the same as your present Western Interstate Compact for Higher Education but, in the parlance of the space age, this idea never got off the ground.

The second proposal, which did make considerable progress, was to initiate a four-year medical program. Notwithstanding a great amount of effort on the part of many individuals, the judgment of the state through its legislature was to reject an appropriation measure which would have established a four-year medical school. While this reversal was a little difficult to accept at the time, the action ultimately proved to be a blessing in disguise. The state reasoned with considerable logic that a four-year medical school must first be predicated upon a very firm and substantial two-year basic program and elected to support the two-year program in a manner to which it previously had not been accustomed. There remained the hopeful expectation that this might eventually lead to the expansion of a four-year program when the economy of the state, its population, and the public attitude dictated the wisdom for such a move.

In the subsequent years, namely since 1947, our state legislature has furnished adequate support to a degree which has permitted the development of as sound an educational program in medicine as I believe is operating anywhere in this country not to the exclusion of the four-year medical schools.

This point is worthy of emphasis for one of the critical issues which has been raised here in Arizona, according to literature sent me for review, is the allegation that the educational merit of the two-year program leaves something to be desired. Such attitudes must be based on misconception or prejudice. Just a moment's reflection will identify for you that only the two-year school has a method of evaluating the merit of not only its program, but also its student accomplishment in comparison with not one, but 30 to 40 four-year schools. In short, we have a built-in evaluating device which even the four-year institution does not enjoy and, by extension, is not in the position to reap the benefits as are we. Our program is the product of exchanges of ideas between our students transferring to the different institutions and between the faculties and administrative officers of the schools concerned. It is axiomatic that if our educational programs were something less than sound, we certainly would not have many schools where we could transfer our students.

What precipitated the crisis concerning the two-year school a few years ago? The attitude which generally favored the closing of the school was dictated on the basis of a changing pattern in medical education which provided that clinical instruction should be introduced early in the medical curriculum, that is within the first two years. It was assumed this integration could not be effectively integrated in the environment of the two-year school with the absence of clinical facilities. Subsequent years have demonstrated the fallacy of such a conclusion and a brief examination of our curriculum will serve to illustrate how such a program may be implemented.

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*Presented by invitation at the Annual Meeting of the Arizona Medical Association – May 1959, Chandler, Ariz.

Curriculum in Brief

Now the designation of a school in "basic medical sciences" is no longer a descriptive appellation through the circumstances that one full year of the two-year program is devoted to courses of clinical instruction if you will permit the clinically oriented courses of pharmacology and pathology to be so designated. The first semester is devoted entirely to the subject area of anatomy and this is followed in the second semester with basic courses in physiology, biochemistry and microbiology. During the sophomore year, didactic instruction in the major medical specialties is concentrated in one full day a week throughout the school year. Here, also, through the medium of ward rounds the sophomore students are introduced to clinical problems and to the patient environment. Later in the semester, following a more formal course in physical diagnosis, the students encounter their first responsibility for the completion of physical examinations and case histories on patients in the medical service at Yankton State Hospital. This instruction in different physical diagnosis is continued during the second semester with a weekly period in three Sioux Falls hospitals which have an aggregate bed capacity of about 700 private patients. I would also note that throughout the second semester groups of students are introduced to psychiatric interviewing techniques on the private patient service of our two professors of psychiatry in Sioux City. Lastly, in fact the last month of the sophomore year, the students are assigned to individual physicians throughout the state on a form of preceptorship program with again provision made for educational emphasis on physical diagnosis and case history preparation.

Now it is axiomatic that with the introduction of this degree of clinical medicine in the erstwhile "basic years" does indeed require exactly the same type of clinical facilities, both teaching personnel and patient material, as is required for the four-year school. The difference is obviously one of scope and quantity but certainly not quality. So important are these clinical requirements as to cause me to offer the suggestion that this should be the only consideration, divorced of all other extraneous influences, which should dictate the choice of location of a school. Without a thoroughly competent clinical staff; that is to say, a nucleus of physicians dedicated to medical education and willing to sacrifice monetary gain from private practice in return for largely voluntary contributions to the teaching program, only then can the success of your program be assured. I am the first to acknowledge not only an indebtedness but the good fortune of having board trained specialists for all clinical subject areas who are unstinting of their contributions to the educational program. That a school of medical sciences should be located in a university environment is taken as a basic assumption, and the reasons for this will become apparent later on.

Singly, the most important factor which serves to influence the content and scope of our curriculum stems from the necessity of fitting our students for clinical progress in not one, but many four-year schools. Similarly, this same circumstance exercises a considerable influence on admissions policies since, in a sense, we are serving as admission officers for the schools accepting these students.

The one very needless obsession which creates a somewhat foreign attitude toward the two-year school centers on this process of transferring students. "Needless" through the circumstance that the South Dakota school has never failed to transfer a student who successfully completed the two-year program. There do exist some positive advantages to the student. In many cases students have compiled fine records at our institution and thus were able to gain admission for continued study at schools where otherwise, as freshmen, they would not have enjoyed this opportunity. More importantly, the students are virtually unanimous in expressing the attitude that their educational experiences are richer and more profitable by having attended the two institutions.

The foreseeable future should not entail any significant problem in transferring students. A survey conducted two years ago, by the Association of American Medical Colleges, identified opportunities for 336 additional students at the junior level. However, based on my experience, this number is probably high. First, it is understandable that schools like to secure the best quality of student material and will accept students providing they are in the upper 10 per cent or in the upper third or half of the class. We are somewhat partial to the philosophy of those schools who recognize that without a bottom half, there would be no upper half, and are agreeable to pairing acceptances from these groups. Secondly, almost one-third of the medical schools require completion of Part I of the national boards to permit advancement or entrance to the junior class. Since these examinations are not available until the summer following the sophomore year, our medical students are understandably reluctant to place their chance for transfer on this examination when, at this late date, the vacancies in the alternate schools of choice are usually filled. In effect then, students are caused to pass over many excellent schools for transfer because they wish to avoid, and quite understandably so, the emotion-packed months of anxious waiting.

Financing

Since the matter of financing the construction and operation of a medical school is of primary concern, perhaps you would be interested in the cost represented in our institution. Our modern medical science building was occupied in 1952 at the cost of $1 million for construction and the fixed installations including laboratory furnishings. However, its depreciated value is something less than $20,000 per year or 10 cents from each taxpayer in the state. This summer an extension of one wing calling for about 10,000 square feet is being built at a cost of $230,000 under the provisions of the Research Construction Act with equal shares of money being provided by the state and federal government. The scientific equipment for teaching and research has an inventoried value of about $300,000. Since 1950 almost $100,000 of research equipment has been added to the inventory from research grants at no specific cost to the state.

The operating budget for the coming fiscal year will provide for an expenditure of nearly $375,000. (Table 1) Of this amount close to $300,000 is derived from state appropriations, student tuitions, and incidental fees, and the prorated state appropriation amounts to only $1.25 per tax-paying citizen per year. The balance of the expenditures are from outside funds, namely the teaching and research grants.

TABLE 1

Projected Expenditures — 1959-6
School of Medical Sciences
State University of South Dakota

Salaries	$235,880	Local Funds
	10,700	Teaching Grants
	17,100	Research Grants
	$263,680	Total
Maintenance and Operation	$ 53,800	Local Funds
	15,000	Teaching Grants
	40,000	Research Grants
	$108,800	Total
Total Expenditures:	$372,480	

'No' for the State, 'Yes' for the Area

Now permit me to translate some of our experiences at South Dakota in response to many of the questions which I note have been raised here concerning the organization of a two, or even a four year medical school.

Is the mere presence of a medical school, either two or four years, the principle factor in assuring a more plentiful supply of physicians for the state? The answer would probably be "no" for the state, but "yes" for the geographical area. These opinions are based on a study (Hard, 1949) made just 10 years ago which presumed to identify the contributions made by the South Dakota school to the physician population of its state and area. Brief spot checks that time have not markedly altered the data. In 1949, a total of 19.1 per cent of the physicians in our state were graduates of our school, but this number has increased to 25 per cent at the present time. Seventy per cent of our graduates remained in the same geographical area to which they transferred in completing their medical study. On the basis of state residency, one-fifth (19.7 per cent) of the native South Dakota students returned to their native state for practice, but about three-fourths of all graduates are practicing in the north central area. In return, medical schools in neighboring states of Minnesota, Iowa and Nebraska have contributed about one-third of the physician population in South Dakota. Perhaps this is a way of saying then that "a fair exchange is no robbery." However, there is ample evidence (Dietrich and Berson, 1953) that many four-year schools, even those state-supported with residency restrictions, do not retain more than 50 per cent of their graduates. It seems quite clear that medical schools in educating physicians are making a contribution to the health and welfare of the body politic at a national level, and one cannot limit its sphere or influence by political or territorial boundaries.

One of the primary purposes for initiating any educational program is to fulfill an unsatisfied need. The question presumes then; are the aspiring medical candidates successfully gaining educational opportunity in existing schools at the present time, and are they apt to in the foreseeable future? But by extension, we could ask whether or not a two-year school would perhaps serve as a stimulus for more students to enter medicine. There is certainly evidence to suggest that Arizona should be producing more doctors on the basis of population. South Dakota has been out-ranking Arizona, and indeed all states without medical education facilities, in a rather consistent manner. I have bothered to tabulate data (Table 2) for only the last six years with the 1957-58 class being the most recent for which figures are available. The national coverage has varied little around a figure of 4.7 freshmen students per 100,000 population, but whereas Arizona consistently falls below average, South Dakota has always exceeded the average and, on occasion, the ratio is double that for Arizona. However, I do caution against an over-enthusiastic embrace of this prospect, for again there are other figures which are somewhat discouraging.

When our new building was designed back in the late 40s, we made provision for an increase in the size of our freshman class from 32 to 44, largely on the basis of the heavy demand occasioned by the returning veterans, and secondly, foreseeing in a population increase the probable occasion for an increased registration in medicine. It is rather disturbing to note that the trend seems to have gone in the opposite direction and to such a degree as to seemingly assure any qualified student gaining entrance into some medical school. This is suggested alone in the fact that Arizona has been able to place a sizable number of students in medical schools. But for South Dakota you will also note (Table 2) that many of the in-state students do gain entrance to medical schools outside the state. This loss is doubly embarrassing for invariably these are the better students as is suggested by their admission to other schools. In short, I would predict that even with the two-year school, you will not hold all of your qualified students, particularly so if the present trend continues. Such being the case, you would follow our course of procedure by filling the class with out-of-state students. While occasionally the taxpayer questions the justification for appropriating money to educate out-of-state students, we offer the satisfying explanation that this seems only a fair exchange, since we ask these other states to educate our students the last two years.

TABLE 2

Number of Freshmen Medical Students

Year	*State*	*Number*	*Ratio/100,000*	*National Ave.*
1957	Arizona	36	3.2	4.7
	South Dakota	36(28* + 8**)	5.2	
1956	Arizona	43	4.1	4.7
	South Dakota	39(25 + 14)	5.7	
1955	Arizona	22	2.2	4.6
	South Dakota	42(35 + 6)	6.1	
1954	Arizona	32	3.3	4.4
	South Dakota	38(30 + 8)	5.8	
1953	Arizona	36	4.0	4.7
	South Dakota	30(21 + 9)	4.7	
1952	Arizona	26	3.0	4.7
	South Dakota	35(24 + 11)	5.7	

*Attending University of South Dakota.
**Attending out-of-state medical schools.
Data compiled from the J. Am. Med. Assoc., Vol. 168 (Education Number), 1958.

Ten-Year Forecast

What happened to our predictions and forecasts of 10 years ago? Briefly stated, it is a case in the reduction of the absolute number of applicants leaving most schools scrambling for the qualified material. Further, this has occurred in the face of one of the most rapid increases in college enrollments that the country has experienced.

I have plotted (Figure 1) total college enrollments over the past 10 years identified in millions starting with about 2 million in 1948 and exceeding 3.4 million in 1958. The solid line represents the absolute number of medical school applicants for the same period plotted in thousands. The years of 1948 to 1951 would embrace a sizable number of veterans, but the very significant aspect of this graph centers over the past six years, when college enrollments have been on the up-swing, but medical applicants have barely maintained the minimal number. The figures on medical applicants for 1958 will show somewhere between 600 and 800 less applicants than last year and this, referring back three and four years on the college enrollment graph, spans a period when enrollments were rising rapidly. I think there is only one conclusion to be drawn from this graph, namely that a decreasing percentage of college candidates are seeking medicine. Time simply does not permit a discussion of the concern which must be represented in these figures. For those particularly interested in this aspect of the problem, I would refer you to a recent publication by the American Council on Education authored by Dr. W. Max Wise entitled "They Come for the Best of Reasons – College Students Today."

Now even though we are not getting the number of applicants, it would be a very optimistic solution if we could report that we are getting the best quality of student. Indeed, the concern expressed for well qualified medical candidates is the subject of an editorial in a recent issue of the Journal of Medical Education authored by one of your panelists here today. (Bowers 1959) To satisfy my own curiosity in the matter, I surveyed the scholastic averages of all of our medical applicants for the years 1952, 1954 and 1959. (Figure 2) The percentage of applicants falling in each grade group are recorded, and to be emphasized is the relatively high percentage of candidates in the 1952 class that range on the left hand side or high side of the scale. By contrast, our most recent class, 1959, will show a much higher percentage on the right hand or low side of the scale.

I mention these data on the availability of qualified student material for three purposes. First, I think it adequately suggests how it is possible for any well qualified medical student to gain entrance into a medical school today. Secondly, it seems to me rather perilous to at-

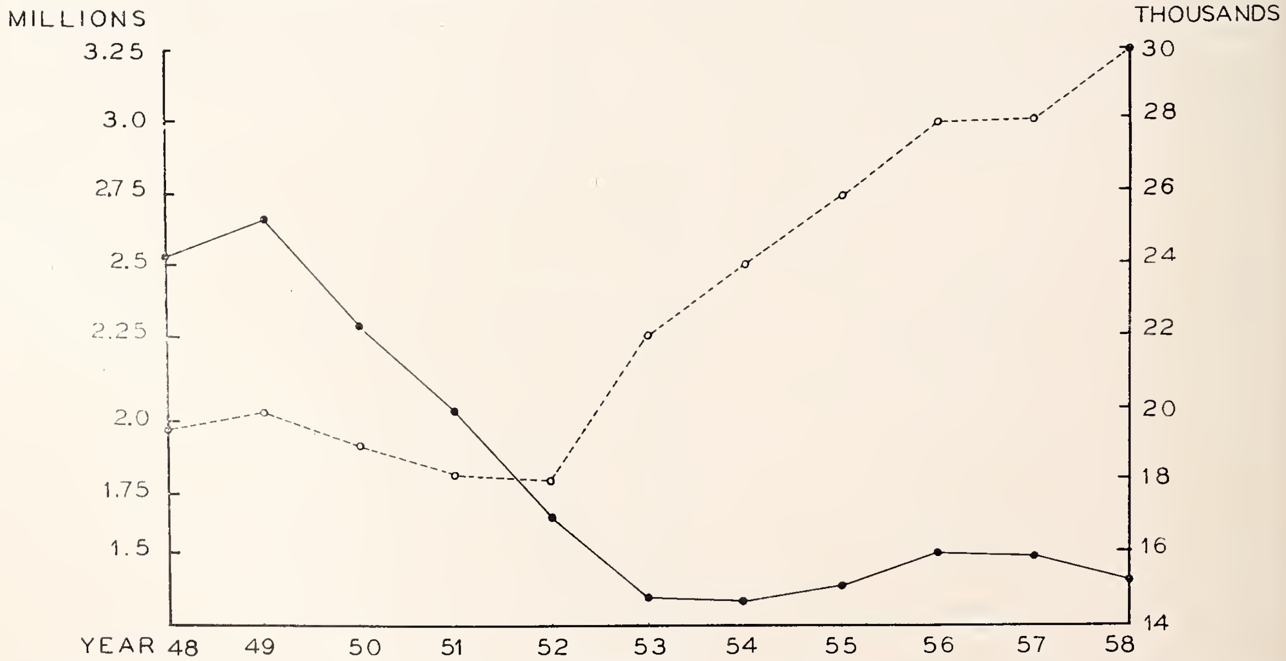

FIGURE 1

The broken line represents the trend in college enrollments, recorded in millions, during the past 10 years. Figures are compiled from reports of the Office of Education and School and Society. The solid line plots the number of medical school applicants recorded in thousands based on figures reported in the J. Am. Med. Assoc., Vol. 168, pp. 1505, 1958.

tempt to predict the number of available medical students on the basis of college enrollments since at the present time it seems there is an inverse relationship between the two. Thirdly, the attraction or its opposite, the lack of interest of students entering the medical profession, and particularly those of high caliber, is a problem which strikes at the very core of the medical profession and its resolution certainly is not alone the responsibility of the medical schools.

Lest someone erroneously conclude that these data suggest this is no time to open a medical school, I would observe that it is during the "lean years" when action is required. The question is simply stated. How is it possible to attract more students into medicine in the absence of educational facilities? What will provide the stimulus to encourage the youth to select medicine as a career if no opportunity exists for the student to become impressed with the educational environment of the medical school?

It is generally agreed that one of the most significant impacts made by four-year schools is the enhancement provided for medical care and services available to an area. The contributions which may be made by a two-year school in this context are not to be ignored as a substantial reason for the existence of such a school.

Time limitations do not permit my detailing the impact which certain specialized programs, sponsored by the school, have made in attempting to meet the needs of medical service in our state. Postgraduate medical programs for physicians and ancillary health personnel; consultation services for public health agencies; studies of diseases of rather endemic interest; these and many other contributions of similar type cause our state physicians to look to the school

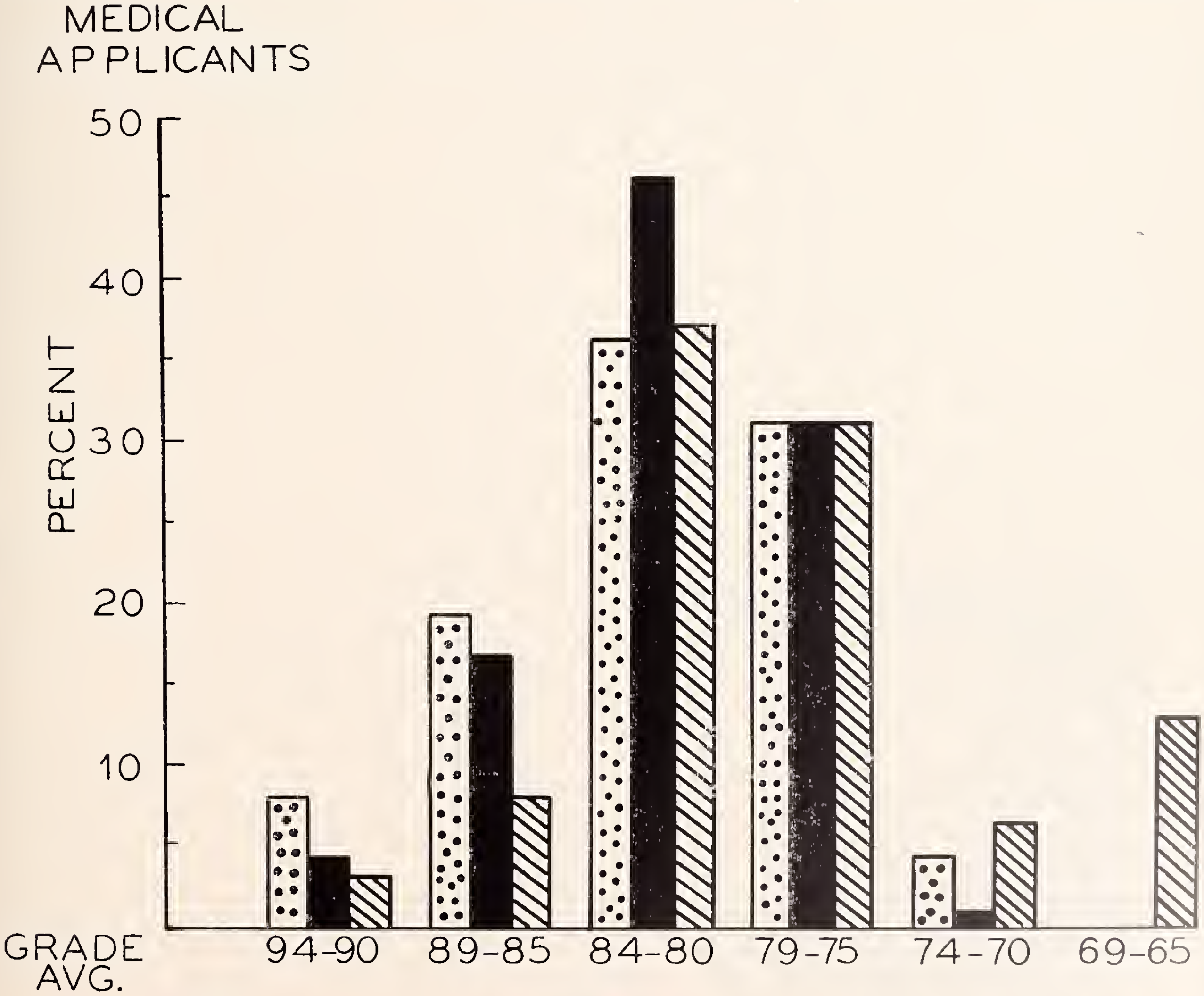

FIGURE 2

The percentage distribution of grade averages provided by all medical applicants is plotted for three classes, 1952 (stippled bar), 1954 (solid bar) and 1959 (lined bar). The total number of applicants represented in each year is 148, 162, and 309 respectively.

for counsel and assistance to the solution of some of their problems. Indeed, our basic faculty perform more than 3,000 diagnostic tests per year at the request of the physician population of which a sizable segment is distributed throughout small urban areas where specialized diagnostic laboratory services are not available.

Lastly, to restrict our attention and analysis of a two-year school only to medical education overlooks entirely what perhaps is singly its most significant contribution and this is the educational impact it exerts throughout the university system. Embracing as it does those symbols which typify the best in higher education, namely its academic standards, intellectual pursuits, the scholarly achievements characterized by research activity; these all serve to bring to the university a maturity and a stature which must be experienced to be appreciated. The only yardstick which may be used to evaluate the significance of this contribution can be recited only in the vacuum that would be created with the absence of the school. The graduate programs forsaken; the hundreds of arts students varying from nurses, to athletes, to music majors who elect undergraduate course offerings, the co-operative pursuits between staff members of different colleges; these and countless other educational ventures would be lost. Yes, these all serve to make up this cultural heritage we characterize as a university system.

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RELATIONSHIP OF THE PRIVATE PRACTITIONER TO A MEDICAL SCHOOL

Marvin E. Johnson, M.D.

MR. CHAIRMAN, members and guests of the Arizona Medical Association:

I wish to thank you for the opportunity to participate in your annual meeting. I am particularly grateful for the chance to share in today's discussion with the distinguished authorities from the field of medical education whom you have just heard.

By way of orientation, let me explain my own situation. I am a private practitioner of medicine from Denver, Colo. At the same time, I am a member of the volunteer faculty of the University of Colorado School of Medicine. In this capacity I endeavor to serve as a teacher by lecture work and supervising an assigned in-patient service at certain periods of the year. I also participate in the teaching programs of three of the private hospitals in Denver. It is from this experience that my opinions have developed.

The appraisal of any problem in the field of medicine must be made from the point of view of what is best for the patients. It is only from this perspective that we can safely view any of our activities or institutions. The best possible care of the sick and the most strenuous efforts to keep the well person in good health represent the only end that we can justify. Everything else is a means to this end.

If we fail to maintain this frame of reference, we might well reduce ourselves to the plane of the charlatan and the quick whom we hold in such disdain. We also lose our status as a profession, and we assume the role of a business, a bad business, to be sure.

The appraisal of the relationship of the private practitioner to a medical school is no exception to this generalization. The reason for the existence of both is the provision of the best possible care to patients and the protection of the health of our people at all times. We must examine this relationship in terms of this principle. Those outside of our profession must educate themselves to be aware of this concept, too. They must realize that superficial consideration will not always give the answer to the best

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method of doing this. The implementation of this desire is sometimes rather complex and requiring of careful orientation followed by unemotional, logical reflection. But we who are charged with the responsibility by oath and by opportunity must lead the way.

No two groups in the field are in a better position nor quite as responsible as those who train the people to do this task, and those who actually carry out the greatest part of the implementation. Let us then examine the relationship of the two as it must exist if they are to fulfill their respective assignments of helping each other to serve the patient.

Responsibilities

The responsibilities of the medical school begin with the training of the men who are to do the actual patient care. They must do everything possible to see that the doctor who comes from their training program is of the highest possible quality by utilizing every method and aid possible that will improve his ability.

The school must inevitably be a place for research and thus a source for increasing our total store of knowledge. It must also serve as a place where the indigent patient can come for first class medical treatment which he is unable to provide for himself. The school, too, will be a place of pioneering in diagnosis and treatment.

A medical school must have a continuing interest in the graduated physician, for this is a field of endeavor in which training and improvement of the individual must never be allowed to stop. The opportunity to advance must be provided often and in various ways.

To carry out these functions most effectively, it seems inevitable that the school will have to call upon the private practitioner. To make a mutually advantageous relationship, it will in turn have to contribute to the practitioner. Let us first deal with this side of the relation. What can the school offer?

The school offers the practitioner a chance to fulfill his obligation and his desire to teach those who will join and succeed him in his chosen profession. In this way those who appreciate what has been given to them can help to pass it on in a way that the best of it will be preserved unbroken. The status of a profession and the insurance of high ethical standards will be maintained.

The school can make available to the participating practitioner a chance to exist at least part time in the stimulating and uplifting academic atmosphere. Such a change in perspective should be of value to the busy man in helping him keep a proper orientation.

The presentation of short, concentrated courses in the specialties and in general practice are particularly valuable aids to the practitioner. They offer beneficial helps with a great economy of time and definitely improve the over-all level of medical practice in an area. On a long range basis, the school offers the residency programs which provide an opportunity for a practitioner to become a specialist, or to change his specialty if he so desires. If proper liaison exists, the school offers the practitioner a chance to participate in research if he has the desire or talent to do so. It was indeed a shrewd Dean who offered a country practitioner by the name of Banting an opportunity to do some experimentation on diabetes.

Young doctors in geographical proximity to a school will find a great opportunity for further development and maintenance of acuity by working in the teaching program while they await the development of their own practice. The indigent patients which utilize the school facilities will also benefit by the presence of these experienced doctors, who also have the time to really serve them. The older and the younger doctor both will find great satisfaction and chances of self-fulfillment in the opportunity for charitable activity in treating these people whose needs are great.

In short, the school which is properly directed can offer much in opportunity and reward to the practitioner with benefit to him and to the patient.

Doctors' Contribution

What, then, does the practitioner contribute to the school or what can he contribute under the proper circumstances? As a group, they offer a large pool of highly experienced talent from which the school can choose whatever amount it needs at no expense. These men can often offer highly specialized qualifications which can not be found elsewhere. This group of teachers will have the advantage of being self-motivated in an effort to maintain their efficiency and effectiveness as teachers. They have no protection of tenure or institutional reputation. They must deliver satisfactorily or be replaced by a superior competitor, or be quietly dropped from the active list. Since they are present in abundance, they may be used to lighten the patient load of the full time teacher to whatever extent necessary.

The private practitioner will serve the special function of teaching the student and house officer his methods of handling the private patient. While "bedside manner" has no scientific virtue, perhaps, it is nonetheless of great value in helping the patient and his family in meeting the fears and problems that accompany illness. This behavior is second nature with the visiting man, and reflects invariably in his performance with patients and in his philosophy at conferences. Some such influence is necessary for the full development of the trainee.

The visiting man will often be of considerable value to the student or house officer in that he is and can be more approachable and sympathetic. He can be more sympathetic with mistakes and reassuring to the uncertain individual without sacrificing a position of authority or infallibility that a professor may have to maintain. In an endeavor so lonely and requiring so much equanimity as medicine, this may be very welcome and even a necessity to the neophyte plagued with doubt. The acquaintanceship and even friendship that develops during this relation will often be of great practical value to the junior man. He will need people who can speak for him with first-hand knowledge when it comes time for hospital appointments, or the search for a place to practice, or to support him during episodes of difficulty that may come early in his practice. No one of us can ever feel detached from or wholly disinterested in a person we have helped to train. He is forever a part of his teacher and the responsibility continues.

The doctor from private practice usually has a longer continuing experience with his patients and therefore comes to know the natural history of diseases and the results of treatment better than the institutional doctor. Too often the professor sees only the severe episodes, or has no chance to personally evaluate the end results at all. This is not a criticism, it is only a fact of life. The private doctor will, of necessity, have more experience in separating the major from the minor problem, a function that the professor may never be called on to perform.

The private practitioner will teach by example and admonition a great respect for the principle of giving good medical care at the lowest possible cost. The teaching institution constantly fights against such problems as excessive laboratory work and prolonged hospitalization. The man best prepared to teach efficiency is the man who must perform efficiently or incur the wrath of patient and hospital administration alike.

And last but not least, from the ranks of private practice must come the general practitioner simply because he doesn't exist elsewhere. He is coming into the full recognition by educators and practitioners that he so richly deserves. He controls more patients and therefore ultimately has more to do with the course that the practice of medicine will take than any other group. What he lacks in special scientific knowledge in special fields he more than makes up for in wisdom that has come from broad experience and trial by fire. The student must be exposed to this man if he is to have a complete training.

Good Rapport Essential

There would seem to be no question of the need for a close relationship between the medical school and the private practitioner. There is great mutual need and the chance for great mutual contribution as we pursue the ultimate goal of good care of patients. What things can or do stand in the way of such a profitable association? Basically the reasons seem to fall into two categories. The first is the ever present human element. The second is the pressure from extraneous sources which do not necessarily have the interest of the patients in view.

Examples of the human element are the men of either side who are motivated by jealousy, feelings of inferiority, greed, or desires of power either personal or political. The medical school must be an institution of service. It can well be the hub of all medical activity. It must not attempt to be the dictator or central control of all medicine. There is no justification for its fostering a competition for the private patient. It has no right to divert tax funds for purposes of gain by a few individuals. If there is a true need for the private patient as teaching material, then private medicine and the school must agree on a method for directing the material needed to the school under circumstances which serve first the patient and then the mutual interests of school and practitioner. Such circumstances do exist, and are easily established if sincerely sought.

The private practitioner on the other hand must be willing to concede the point that the medical school is greater than any of us individually. Its needs must be met, or soon we shall have no profession at all. He must be keenly aware of the status and treatment of his colleague who is engaged in teaching. Such teachers need his understanding and wholehearted support if their situation is to remain tenable. He should unselfishly help them to acquire the facilities and the compensation they deserve. Unjust treatment of any honorable doctor anywhere is a threat to all — if no more unselfish motive for support than this can be found, this should be a powerful stimulus for co-operation.

The second category of obstacles I shall only mention without elaboration. There are forces in action outside the profession that have special goals that do not consider either the patient or the doctor. It is obvious that a part of the strategy is to separate the medical profession into a number of fighting and ineffectual special interest groups and thereby control everything. The cultivation of strife between medical school and private practitioner is a basic tactic in this struggle. Both parties must be keenly aware of the possibility of false prophets.

The necessary goal of both medical school and private practitioner is the establishment of a relationship of loyalty and mutual aid based on sincere mutual respect.

It is only by establishing the relationship on these terms that each will be able to do the utmost to serve the patients in the best possible manner.

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WICHE

Fred Dow Fagg Jr., Ph.D.

MR. CHAIRMAN, ladies and gentlemen:

I think it will take a very short time preceding the panel, to tell you people a little about our program, because I think you know most of the pattern of the commission. It's made up now of a group of states, and we have recently added Nevada. The Hawaiian Islands also will soon come into our program. WICHE was started in 1950. I think it was primarily to help those states which did not have medical schools, schools of veterinary medicine, or schools of dentistry. Students are sent from the states where there is no medical school, dental school, or school of veterinary science, to another state having such schools. Let me tell you a little about the program in medicine.

Arizona at the present time is sending 32 students, and those students are attending schools in five states. Arizona is sending four to dental schools and 26 to schools of veterinary medicine. Alaska is benefitting by sending six medical students, Montana sends four, New Mexico 36, Wyoming 16. There is something like a total of 94 students who might not otherwise find their way into medicine if it weren't for this Western interstate program. Thirty-eight students are being helped in dentistry. Incidentally, the costs for tuition of the 94 medical students is $108,000. The tuition of 38 dental students is $57,600. For the 109 veterinary medicine students, it costs $130,800.

What we have been trying to do is collaborate here in the West, on the general theory that we ought to co-operate wherever our programs can be advantageous to one another. We are not only working in a field of the exchange of students, but we're trying to work in practically every field of higher education. One of the most active programs is in providing for nurses and the swapping of experiences in that field. One of the most interesting programs is mental health, which was started in 1956. We have organized a program to bring together people who are expert in the field of mental health, and to train more.

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*Presented by Fred Dow Fagg Jr., LL.D., chairman, Western Interstate Compact for Higher Education, before the guests and members of The Arizona Medical Association, Inc., at its annual meeting in Chandler, Ariz., May 1, 1959.

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I think you might be interested in knowing of the financial side of the WICHE program. We receive something like $80,000 a year from the individual states to help in the fields of our regular administrative programs. We have received through foundations over three-quarters of a million dollars, and we will have another half million for the next two or three years to work on programs that might be advantageous to the participating states.

I am delighted to be here to testify on behalf of the work of our 39 commissioners. We meet once a year and try to work out programs of benefit to all areas. We know that you people are interested in a program of medical education. We have no counsel to offer you except that you make a study of the needs of the State of Arizona. We also have been studying, for some months, what the West might need in the way of more doctors. We know our study will be interesting to you, but you have your own individual state problem. We offer our utmost co-operation to you. If there is any way in which we can be helpful, we hope you'll let us know.

Now, perhaps I can be of more help on the panel than elaborating on our program. We know you have a weighty educational problem. Through the Western College Association, I have worked for many years with Dr. Grady Gammage and Dr. Richard Harvill. You can be sure the latchstring is out anytime we can be helpful to you with your problems.

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Journal of
The ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 16 SEPTEMBER, 1959 NO. 9

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7 Exclusive Publication—Articles are accepted for publication on condition that they are contrihuted solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The Editor is always **ready, willing,** and **happy to help** in any way possible.

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WHAT DID IKE SAY?

By Leslie B. Smith, M.D.

SINCE PRESIDENT Eisenhower addressed The American Medical Association on June 10, 1959, there have been varied statements and interpretations relative to what he said. He has been credited as stating that doctors charge too much – that he advised a reduction in doctors' charges – that he blamed the doctors for contributing to inflation, and that our fees are unreasonable.

He did not accuse doctors of any malice or wrong; but, contrary-wise, he was most laudatory as exemplified by the following quotations: "The American Medical Association, representing physicians in general practice and specialities in many fields, has brilliantly earned the high position it holds in the nation." "Indeed, Lord Bryce observed on one of his last visits to the United States that 'medicine is the only profession that labors incessantly to destroy the reason for its own existence." He cited the health gains brought about by medicine during the last 40 years, and commented " . . . for all this, the nation is profoundly grateful." " . . . the well-nigh unbelievable advance of medicine during these past 100 years . . ." " . . . one out of every 10 Americans enters a hospital each year, and most of them quickly return to their normal activities."

Mr. Eisenhower's discussion of our economy and its future with the inevitable impact of the inflationary trend was indeed basic, well stated, and worthy of review by all. The President challenged us as, " . . . community leaders – to promote greater understanding between fiscal responsibility and a successful, meaningful life for all in a climate of freedom."

The only mention of fees by our President was in this paragraph: "The medical profession, as much as any other, has a vital interest in preventing inflation. Certainly it wants to provide its services for a fee within range of what people can reasonably pay." Did he mean that we are not now, with rare exceptions, complying with this formula? From the tone of his speech considered as a whole, I am sure that he did not intend to make any insinuation, but embodied 'reasonable fee' as a structure with the basic principles of medicine.

President Eisenhower's address is reproduced in this issue, and the reading of his speech will be enjoyed by all those who can spare 10-15 minutes. It is my opinion that we can well serve our public relations by requisitioning reprints to place in all our offices for distribution to our patients and friends — order today.

EDITOR'S NOTE

Included in this issue are six of the articles as presented at the recent state medical meeting held in Chandler, May 1959, in regard to medical education in the United States with particular reference to the establishment of a medical school in Arizona. Four additional articles will follow as soon as they are available. All of the articles will be published at a later date in a pamphlet for distribution to those who desire this information in concise form.

LETTER TO THE EDITOR

Sir:

Thank you for your note in reference to the letter which my father had written in 1916. As I indicated, it occurred to me that perhaps some of the newer practitioners might be interested in what things were like "in the good old days," and some of the older men who might have known my father might reminisce a bit on the tale which a newcomer to the area has to tell to the folks back East.

Here is the letter.

J. R. HORST, M.D.,
Los Angeles, Calif.

OFFICE OF
J. L. WALES, M. D.
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GLOBE, ARIZONA. May 12, 1916

Dear Grandparents:

It is now noon and I have today made 4 calls on private patients and have seen 3 in the office. One is spending 6 months of his valuable time in the jail for bootlegging and he has several to keep him company. This month I have collected $100 in Globe besides my $200 for my big trip, so I have a pretty good start for this month.

Now, I promised to tell you about my return trip. First let me say that the ranch where I stayed covers an area 15x25 miles, about 400 square miles, or more than twice the space covered by the whole city of St. Louis, and that there are about 6000 cattle there. They were just starting to have a round up having a contract to ship 1000 yearlings. A steer one year old brings $33, 15 years ago it brought only $5. The ranch just sold for $325,000, and the new manager was the one hurt by his horse falling on him. The elevation there is 5,000 feet, in Globe it is 3500 and in Phoenix 1200, so that it was cooler than at Globe and some of the trees were not entirely out. The people live up to the name of the place "Pleasant Valley" but are a long place away from a railroad having to drive their cattle 100 miles to the nearest railroad. When they visit Globe they come as I did or ride 90 miles on horseback. All supplies have to be stored up in summer and many have to be packed in on burros, last winter they had 2 foot of snow with 15 degrees below zero. One of the cowboys, or cowpunchers as they call themselves, had punched cattle in the Panhandle district and was in Woodward when it had only a dozen buildings. He was there 2 years ago and says it is a flourishing town of 5,000. He had also been a rider with the wild west show 101 ranch and had been all over U.S. with them. Besides this he has taken the part of a cowboy in moving picture shows, been bartender, railroad man, forest ranger & etc. He told me of a 14 year old boy in this neighborhood who had never seen a railroad, so it takes all kind of people to make a world.

When I was ready to start back Mrs. Marley took a kodak picture of me on my horse with my cowboy regalia, and when I get them I will forward them on to you. I left at 9 am Sunday, rested but still a little stiff from my ride. We rode till 11 o'clock when we reached the rock house. Here I saw my first asbestos mine. Did you know that it was mined and sold at 20 cents a pound in the crude state? Here was also the ruins of the prehistoric people, the remains of rock houses was all that I could make out. The men had dug up a skeleton shortly before. At some of these places they have dug up beautiful vases 4 & 5 feet high, and also have found finger prints which with the small skeletons point to the people being rather small. Another thing rather curious is that these places are all on hills and mountain tops where water is not conveniently had. The miner here cooked our dinner on an open fire. He used an iron pot with the lid having upturned edges to hold the red coals and thus furnished an oven in which he bakes the bread.

After an hour we started out again and went over the mountains, each one a little lower and as we reached the lower level in the afternoon it was quite warm. When my guide was about a mile ahead of me on one of the lower hills, I noticed my horse suddenly prick up his ears and ahead I saw an old bull in an open corral looking wickedly, straight my way. What did I do? Why I immediately, at once, turned to the side and gave Mr. Bull a wide berth, this hombre (Mexican for man or fellow) was not looking for trouble. Quite often we passed a bunch of cattle, and finally a group of about 30 horses. We had now reached the Flying H ranch where we were to pass the night. It was now 4:30.

At the Flying H ranch there are 15 cowpunchers and as they were having a round up, I got to meet them all. The cook had an idea that I would be back about this time and so in honor of the doctor he gave us for supper some fine fried spring chicken, yum yum, it did taste good. Besides this we had beans, corn, preserves, butter, coffee, and green peppers, this is a great country for canned food. Everything is packed to this ranch on burros, including corn for the winter use of the horses. Everything is rocks, rocks and rocks. In order to make a garden you have to dig a hole and then put the rocks in the bottom to get enough soil. There was a small patch of good ground on which they grew alfalfa and supplied it with water by an irrigation ditch. From this ditch we got our water, washed our faces and then pretended to wipe on the common towel, which was white at one time but now was about the color of weak coffee. There were no women at this ranch, the house had 4 rooms, no carpets, no chairs, boxes taking place of the latter, and I assure you that the cook's shirt had not seen a washing for at least a month, while his trousers had enough grease in them to fry a pan of potatoes. Several men had sore eyes which gave me a little to do. After supper an interesting poker game was in progress but about 10 pm I decided that sleep would do me more good than watching the game. Each bed was wrapped up in a piece of canvas, one of the men spread the canvas and put a few extra blankets on it and I was ready to retire to my room, the roof of which was the sky. The nights are always beautiful here, especially moonlight nights, when you can almost read a paper by moonlight.

I slept the sleep of the just and did not hear a thing till I was awakened by the loud call of the cook. I looked around and saw everyone throwing off the covers and did likewise. As it was not the style here to completely disrobe at night, all I had to put on was my shoes and socks. But the sun was not in sight and my watch said 5 o'clock. After breakfast of some more of that fine spring fry we went back to the corral, where the horses had been turned in and every man took his rope and lassoed his mount. Some did the blacksmith stunt shoeing their horses.

Again decked out I bid them adios (a-de-os good by). After going 12 miles through a country free from trees but full of cactus and small brush we stopped at a ranch surrounded by beautiful green, a regular oasis. Here is a very large fig tree, claimed by some to be the largest in U.S., it also gives 3 crops a year. By this time I felt quite a rider, my guide complimented me on riding so well for not being used to it and said that if I would ride a little each day I would soon be a good rider. He then told me that he had seen some easterners ride 10 miles be so sore that they could not get around for several days, whereas I had ridden 50 miles at one stretch with very little discomfort the next day.

Here I was turned over to a new guide, who took me to the next stop, the ferry where I had left my car. It was awfully hot in this region around Roosevelt lake, and I got a severe sunburn from which I am still peeling. After crossing the ferry I had completed my 100 mile horseback trip and was delighted to see that no one had run off with my faithful Lizzie. The ferry man had kept an eye on it for me. He gave me dinner and at 2 pm we left the lake. I had the parts needed for repair of the hub sent out and found them at one of the houses but decided it was too big a job to change and went straight through to town. At one place there is a long hill, 7 miles long, and I had to stop several times to give my engine a chance to cool.

At 5 pm I returned to the beautiful town of Globe, dirty, and weary but not foot sore. The trip had been a hard one but it was such an experience as I had never had before and I had really enjoyed it, and would not have missed it for anything in the world. That evening at supper I started to leave the table without waiting for the dessert (strawberry shortcake) so long had I been away from civilization. For a couple of days I walked with a heavy tread, and felt as if I was still in the saddle, and also nursed a raw place where the stirrup rubbed my ankle, and felt like sitting only on well cushioned chairs. But now I am feeling fine as ever, for I certainly never was better nor more fit to make a hard trip.

Wherever there are people there is an occasional need for a doctor and so someday I will make this trip or a similar trip again. This patient got as good service as he could have gotten in St. Louis or anywhere else, that is as it should be. All this bosh about country doc's not needing to know much should be forgotten, for when a doctor gets 88 miles from the nearest place to get a consultation he is thrown on his own resources and should know all there is to be known on a subject. My hospital experience certainly comes in handy and I am glad that I took all that I did, and that I went to the very best medical school.

This is quite a letter and I will ask you to excuse me for a while as I have quite a little reading that I wish to do besides taking in a couple of dances soon. I am now a member of the Cobre Valley Country Club. Cobre is Spanish for copper. Golf is all the craze but I do not expect to take it up, but will stay on the job and pick up as many dollars as possible.

With love & very best wishes.

Best regards to the Maupus Family.

(Continued from Page 626)

service to yourselves, and to all of us, as you teach that the future of our republic and the free world depends upon our ability to maintain fiscal soundness in government, a robust economy, and a stable dollar.

Impressed as we are by progress in the medical sciences, including miracle drugs, miracle operations and breakthroughs in eliminating heretofore incurable diseases, we sometimes forget that this progress deposits new problems on our doorstep.

Familiar conditions, even perspectives, have a disturbing habit of changing profoundly over a short period of time. For example, some of you may recall a remark made by your distinguished fellow professional, Sir William Osler, at the turn of the century. In his farewell address at Johns Hopkins University before returning to England in 1905, he said:

"My second fixed idea is the uselessness of man above 60 years of age and the incalculable benefit it would be in commercial, political, and in professional life, if, as a matter of course, man stopped work at this age."

In 1905 I was 15. It is quite likely that I then, and others here of a comparable age, would have agreed with Sir William. But certainly we now repudiate the thought.

Nonetheless, the sober fact was that more than half a century ago, relatively few people reached the age of 60. The average life expectancy for a person born in 1900 was 48 years. Today it is over 70. In 1910 there were 3 million men and women 65 years of age and over; today there are more than 15 million.

This shift in the age pattern of our population has been accompanied, of course, by revolutionary changes in our social and economic structure.

We are no longer an agrarian society. Industrial and technological changes have centered our population in cities and large towns, bringing far-reaching alterations in our living habits.

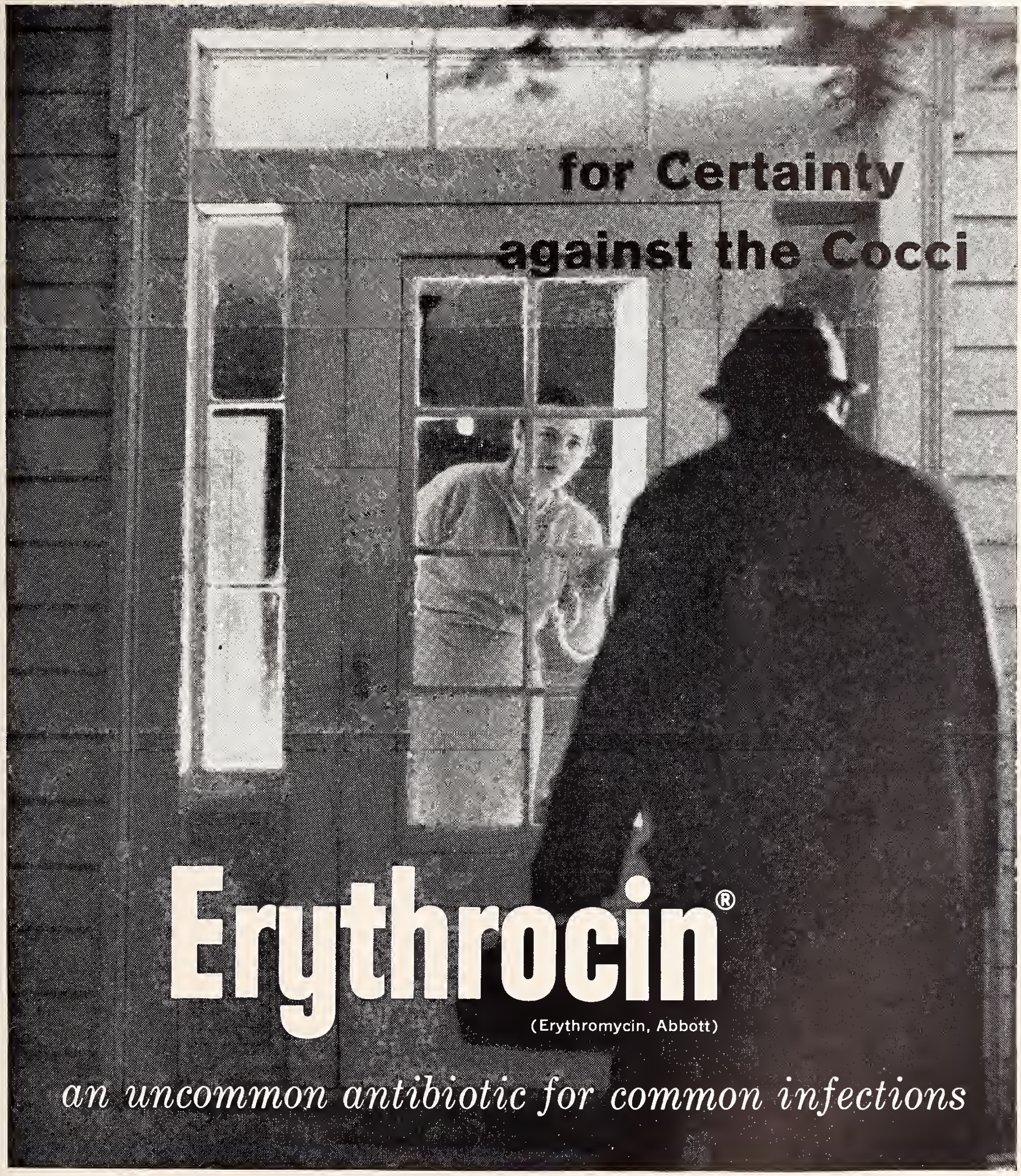
Thus most of our senior citizens of today no longer can enjoy the relative security which their pioneering parents and grandparents provided for themselves individually as farmers or as small, independent shopkeepers. Our older people largely live, today, on fixed retirement income represented in pensions, insurance policies and savings. To this group, inflation is not merely a threat — it is a robber and a thief. It takes the bread out of their mouths, the clothes off their backs, and it limits their access to the medical care and facilities they need.

Here is a situation that calls for true team effort among the medical professions, industry, government, and the broad body of our citizenry.

We must work together to make possible for our senior citizens, meaningful activity so that they can become — as they all hope to — independent, useful and creative members of our society.

I learn that the American Medical Association has embarked upon an all-inclusive program to re-orient our thinking about the place of elder citizens in modern society and to help them

(Continued on Page 652)



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Topics of Current Medical Interest

ARIZONA POISONING CONTROL INFORMATION CENTER

IN CO-OPERATION WITH THE ARIZONA MEDICAL ASSOCIATION

Neurotoxic Effects Accompanying Poisoning From the Phenothiazine Tranquilizers

PERHAPS THE most alarming of the toxic effects associated with acute poisoning from the phenothiazine tranquilizers (e.g. chlorpromazine (Thorazine), promazine (Sparine), prochlorperazine (Compazine), perphenazine (Trilafon), and mepazine (Pacatal) are the severe neurological manifestations sometimes referred to as an "extrapyramidal syndrome." These reactions may consist of recurrent episodes of marked drowsiness and lethargy, drooling, fixed stare, oculygyric crises, retraction and spasms of the neck, trismus, opisthotonos, and sometimes flexor rigidity and hyperreflexia(1,2). It appears that children are particularly susceptible to this toxicity of the phenothiazines. The labile nervous system of children has been suggested as a possible reason for this susceptibility(3).

The similarity of the neurological reactions resulting from the phenothiazine-type tranquilizer to those accompanying certain disorders involving the central nervous system has resulted in diagnostic confusion(3,4). For example, severe retractional and rotational spasms of the neck have led to confusion with meningitis. Trismus has suggssted tetanus. Posterior-hindbrain signs such as speech, swallowing and respiratory difficulties (laryngospasm) have indicated diagnoses of bulbar poliomyelitis and led to preparations for tracheotomy. Marked opisthotonos with extensor spasm of the extremities has been interpreted as decerebrate rigidity(2). Nelson(2) has suggested that "diagnostic confusion may be cleared by consideration of phenothiazine intoxication in any patient with an intact sensorium and the acute onset of severe and unusual extrapyramidal and bulbar signs (particularly fixed stare, drooling, trismus, opisthotonos, and shoulder-girdle spasms.") An example of a case history recently reported in the literature(1) which would tend to support this view is as follows:

> "A 17-month-old boy was admitted to a hospital because of drowsiness and opisthotonos. The patient had been well until 4½ hours prior to admission, when it was noticed that the child's head was 'drawn back and pulled to one side.' The child then fell to the floor, but was not unconscious. The episode lasted only a few minutes and the child appeared normal except for drowsiness, which lasted an additional five to 10 minutes. Another episode occurred in 30 minutes. Shortly after admission to the hospital, two additional attacks of opisthotonos and drowsiness were observed with a 30-minute period. The mother was questioned as to whether she had given the child a tranquilizer or whether such a drug was present in the home. The mother opened her purse and found an empty bottle which had contained several 5 mg. prochlorperazine (Compazine) tablets. Only a few of the tablets were found loose in the purse. The mother had recalled that the child had been playing with her purse two hours prior to the onset of his episode."

A simple, rapid chemical test which may aid in the detection of phenothiazine toxicity is the ferric chloride test reported by Forrest *et al.*(5). A test solution consisting of four parts of 10 per cent sulfuric acid with one part of 5 per cent ferric chloride solution is employed in this test. Equal volumes of urine and the test solution (e.g. 1 ml. of each) are mixed in a test tube. The rapid formation of a color varying from light to dark violet is indicative of the presence of a phenothiazine derivative. The violet color is considered to be due to the reaction of a relatively unstable metabolite of the phenothiazine tranquilizer with ferric ions in an acid medium(5). The low pH of the test solution is said to establish an acidity at which no interference by salicylates, such as aspirin, is possible.(5) A slight modification of the ferric chloride test used to detect the presence of a metabolite of a phenothiazine tranquilizer in the urine has been recently reported.(6)

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STATISTICS OF 93 POISONING CASES IN ARIZONA DURING JUNE 1959

	Per cent	*Number*
Under five years	76.3	71
Six to 15 years	2.2	2
16 to 30 years	8.6	8
31 to 45 years	5.4	5
Over 45 years	3.2	3
Not reported	4.3	4
Nature of Incident:		
Accidental	91.4	85
Intentional	8.6	8
Time of Day:		
Between 6 a.m. and noon	30.1	28
Between noon and 6 p.m.	29.0	27
Between 6 p.m. and midnight	18.3	17
Between midnight and 6 a.m.	1.1	1
Not reported	21.5	20
Outcome:		
Recovery	100.0	93
Fatal	0.0	0

**CAUSATIVE AGENTS:*

	Number	*Per Cent*
Internal Medicines		
Aspirin	21	21.9
Other Analgesics	1	1.0
Barbiturates	10	10.4
Antihistamines	3	3.1
Laxatives	1	1.0
Cough Medicine	0	0.0
Tranquilizers	2	2.1
Others	5	5.2
Subtotal	43	44.7
External Medicines		
Liniment	0	0.0
Antiseptics	4	4.2
Others	2	2.1
Subtotal	6	6.3
Household Preparations		
Soaps, detergents, etc.	2	2.1
Disinfectants	1	1.0
Bleach	2	2.1
Lye, corrosives, drain cleaners	3	3.1
Furniture and floor polish	1	1.0
Subtotal	9	9.3
Petroleum Distillates		
Kerosene	2	2.1
Gasoline	3	3.1
Others	1	1.0
Cosmetics	2	2.1
Subtotal	8	8.3
Pesticides		
Insecticides	11	11.5
Rodenticides	0	0.0
Others	0	0.0
Subtotal	11	11.5
Paints, Varnishes, Solvents, etc.	5	5.2
Plants	2	2.1
Miscellaneous	6	6.3
Unspecified	6	6.3
TOTAL	96*	100.0

*The total number of causative agents exceeds the actual number of poisoning cases since in certain individual poisoning incidents more than one agent was involved.

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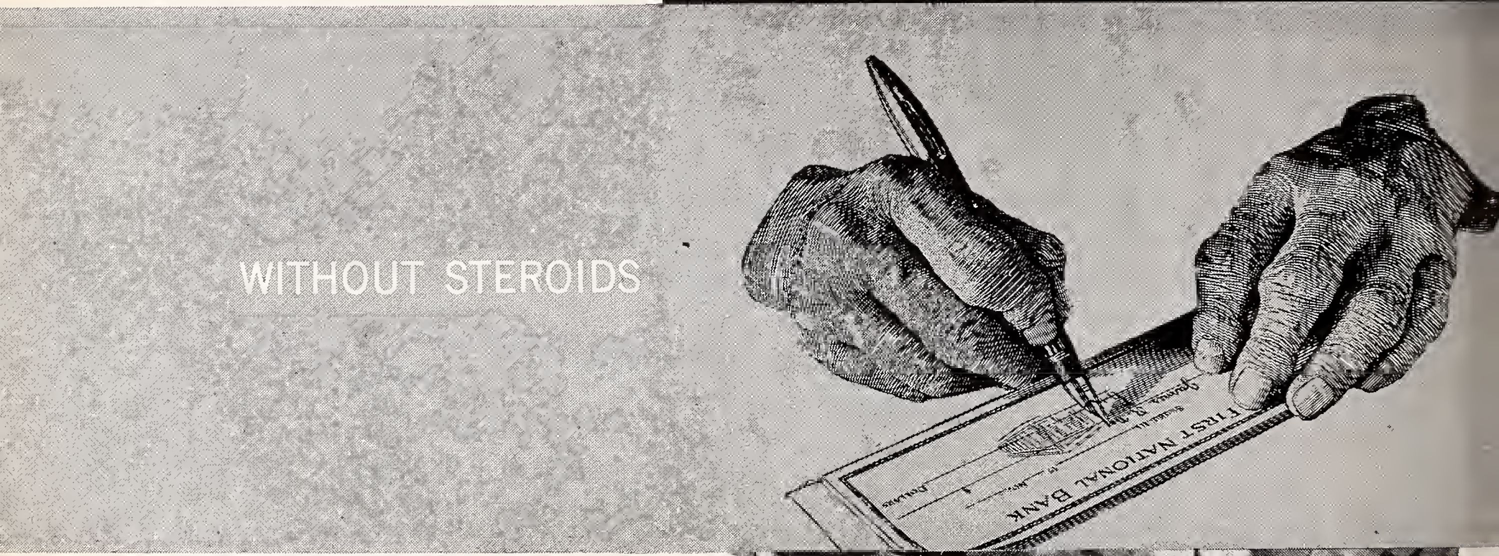

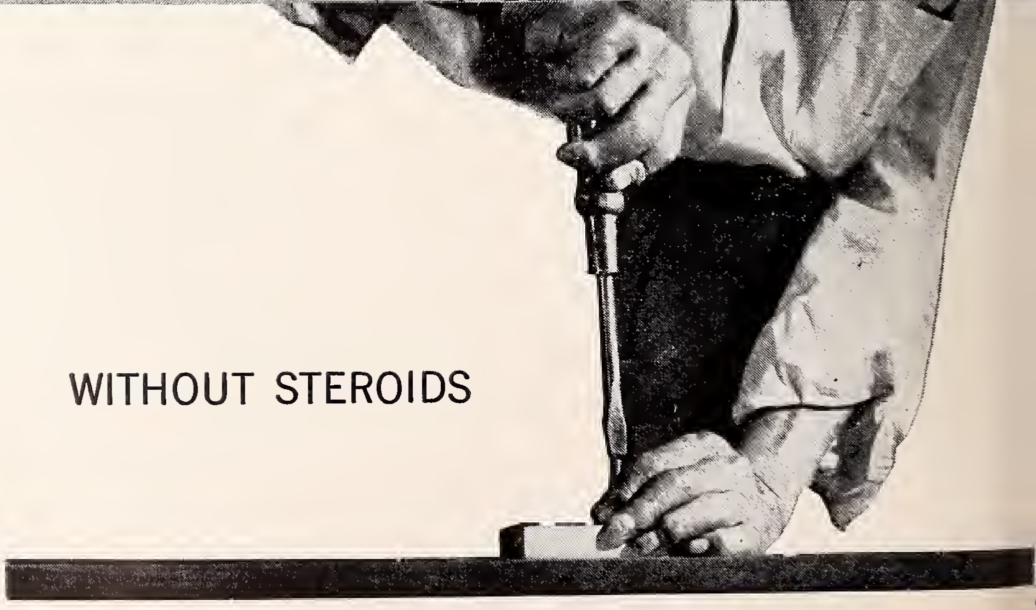

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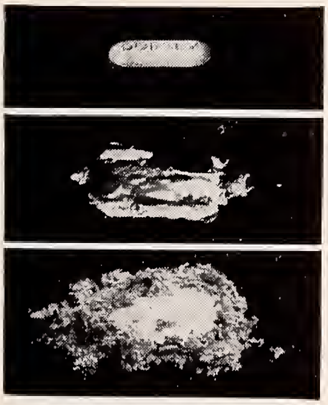

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HOSPITAL PROBLEMS IN A MEDIUM-SIZED COMMUNITY

Arthur Dudley, M.D.

I WAS most pleased and highly honored to be invited by Dr. Bellaire to speak to you gentlemen regarding "Hospital Problems in a Medium-sized Community." However, to make the title more descriptive, it should be "Hospital Problems in an Isolated, Growing, Medium-sized Community."

Tucson, Ariz., population 235,000, is in the southern portion of the state. For sake of definition, there are only two cities in Arizona: Namely, Phoenix and Tucson. The smaller communities of Arizona range in population from a few hundred to a few thousand. The closest city, Phoenix, is 125 miles to the north. Tucson, like most of the communities in the Southwest is enjoying an explosive population increase of 1,200 per month.

Our hospital problems can be categorized into those of staff and those of administration, but they cannot be separated.

Arizona has 33 general hospitals, either publically or privately supported. In Tucson, there are two general hospitals which admit private patients. St. Mary's Hospital has a capacity of 312 beds plus 45 bassinets; Tucson Medical Center, a capacity of 236 beds plus 40 bassinets. Both hospitals are currently expanding to increase this total by 200 additional beds. In addition, the Pima County Hospital has a 140-bed capacity for indigent patients. This gives a total of 548 beds available for private patients. During the five years that I have been in Tucson, the population has increased some 75,000 while the total bed capacity has only increased by 45.

The remaining hospitals in the community have a combined total of 344 beds, but these are largely restricted in the nature of their admission policies such as the VA, railroad and Indian hospitals. In addition, Davis-Monthan Air Force Base has had an economic and population impact on the community. They have a total of 90 beds plus 23 bassinets available. The military dependents have periodically relied upon local facilities depending upon the number of doctors assigned at the base.

There are only 1,121 doctors in the State of Arizona, nearly 800 in the Phoenix area. There are 245 members in the Pima County Medical Society, of whom only four do not practice in Tucson. Of the 240 doctors practicing in Tucson, 40 are GPs, 112 or 48 per cent, are board certified specialists. The remainder are either board qualified specialists or general practitioners who limit their practice to very small fields, such as internal medicine or pediatrics. The 83 surgical specialists are headed by 27 general surgeons, 10 orthopods, 15 OB-GYN, five urologists, five chest surgeons, two neurosurgeons and one plastic surgeon.

The Tucson doctor generally is on the active or courtesy staff of each hospital and in addition, serves on the staff of the county hospital. He donates a certain portion of his time each year covering one of the services at the county hospital on a voluntary basis.

Admission to Staff

Admission to the staff at either of the private hospitals creates no obstacle to the new doctor in town. An application is submitted to the administrator stating which privileges he is applying for. The general practitioner would generally apply for internal medicine, pediatrics, uncomplicated obstetrics, and minor surgery. Either the administrator or the chief of staff has the authority to issue temporary courtesy staff privileges. An individual remains on this staff until his credentials are verified by letter to hospitals and medical societies of previous residency, and until he has become a member of the local medical society. While on the temporary courtesy staff, he must be sponsored by a member of the active staff, who, in turn, assumes the responsibility for his conduct in the hospital. However, he does have full privileges within the realm of his capabilities. Upon verification of credentials, the application is then passed by each of the various committees, including the committee of general practice. The completed application is passed on finally by the executive board, composed of seven doctors plus the administrator at St. Mary's Hospital, and the professional staff at the Tucson Medical Center. Full courtesy staff privileges are then awarded. At a stated interval, he is eligible for promotion to the active staff.

The Staffs

The staffs at both hospitals are self-governing. There is a president, president-elect, vice president, secretary, and three to six members of the executive committee or medical advisory board. The officers are elected by the active staff for a one-year period of time, and the executive board is elected for three years on a staggered-term basis. The executive board meets with the administrator monthly to review committee reports and general administrative problems within the hospital which would affect the professional staff. In both our hospitals, the administrators do not interfere in those problems which are purely professional; however, they do determine the amount of help and space available, hospital resources and liabilities in solving these problems. Thereby, the professional and administrative staffs work as a team.

The executive board also acts as a board of censure. Any doctor charged with misconduct is brought before this board. The matter is thoroughly investigated and a decision and disposition made. Fortunately, there have been very few instances in Tucson whereby it has been necessary to remove a man's privileges. Those individuals who are guilty of flagrant misconduct are generally removed from the county society membership at the time that they lose staff privileges.

Both hospitals hold staff meetings quarterly. The various departments are represented by committees which meet monthly and which operate regularly in order to police their own individual services. These committees are also responsible for the review of applications to ascertain whether an applicant is eligible for privileges within their respective departments.

Bed Shortage

With a total bed capacity of 548 beds for private patients in a population center of 235,000, our biggest problem is lack of hospital beds. Over the past several years, the hospital administrators have set down a rather hard and fast rule that the admission will be made purely on a first-come, first-served basis. During the winter months, when there is a large influx of winter visitors which will increase the population by approximately 50,000, there is an acute bed shortage and it has been necessary to resort to hall beds. The administrators have been very helpful in increasing the total bed capacity by making three-bed rooms out of semis, and semis out of what were formerly private rooms. Also, they co-operate by moving patients so that beds will be utilized to the greatest extent.

Both hospitals have an internship-residency program. Unfortunately, most of the interns and residents are foreign-born and the problem of communication does exist. Repeated attempts have been made to improve the quality and type of program so that American medical school graduates will become interested in the community, but to date this has met with very little success.

Out-patient Facilities Lacking

Pima County Hospital maintains a very active in-patient service and clinic for the welfare patient. However, there are no true hospital out-patient clinical facilities for the medically indigent. They are cared for in private offices on a no-fee, or partial fee basis. The private hospitals sustain a sizable annual loss on these patients requiring hospitalization. This is quite dissimilar from many of the centers in the East where the hospital maintains an active out-patient clinic for house staff training. This factor, possibly accounts for the difficulty in attracting qualified interns and residents. The hospitals have found it financially impractical to open and maintain active out-patient departments. Like all hospitals throughout the country, the cost of personnel, supplies and equipment has sky-rocketed much faster than the fees received from bed rentals and services. So long as our population continues to expand at the present rate, our hospitals will continue to operate on merely a break-even basis and will not be able to institute clinical out-patient departments.

The hospital administrators, one a Catholic sister, one a lay administrator, for the private hospitals, and a third a medical doctor for the county hospital actively co-operate with each other in the fields of hospital administration and finance. These three administrators meet regularly for discussion of mutual problems, especially concerning the hospital care of the medically indigent. No patient is refused hospitalization because of inability to pay. An example of co-operating financially is the recent successful completion of a joint hospital drive which raised $1 million by voluntary subscription and their joint support to obtain maximum amounts of Hill-Burton funds. These monies were shared equally between them for construction of 200 additional hospital beds.

One of our greatest problems is lack of nurses and ancillary personnel. At the present time, we have a three-year diploma school for RNs. The new collegiate program at the University of Arizona graduates its first class of nurses next year. We have a school for practical nurses and these, in turn, assume many of the duties of the RNs. Hospital help, however, is seriously short at best, critical at times. Out-of-state sources supply the majority of trained personnel.

GP's Role

Last, but not least, I should mention the role of the general practitioner. As stated above, there are 40 general practitioners in the community, only four or five do major surgery. For those of you who are in a community where major surgery is authorized for general practitioners, this may seem unduly restrictive. However, I feel that we in Tucson are the prototype of general practice in a medium-sized community. In my own practice, I cover the fields of general medicine, pediatrics, obstetrics, and minor surgery. All of us are actively engaged in hospital practice. However, office practice is the lion's share of our work. The new general practitioners objecting to these restrictions at the hospitals are those men who come from communities outside of the state where they were formerly doing general surgery. However, if a man qualifies by training in surgery, he can get a position on the surgical staff. The Tucson GP is so busy with office practice that there is no incentive to supplement his income with surgical procedures.

Our relationship with the specialists in town is ideal. The referred patient will be returned to us for further care and treatment. Many of the specialists sign out to a GP on weekends or days off. The Southern Arizona Chapter of the Arizona Academy of General Practice utilizes the specialists to good advantage at their monthly meetings by inviting them as speakers. This kind of teamwork has eliminated friction between the medical groups. Working as a team, we feel that we have the patient's best interest at heart.

In summary, I have tried to paint a word picture of our hospital and professional problems. The general practitioner in Tucson is a respected individual who has full privileges in both hospitals except in major surgery. Our hospital problems are lack of money, lack of beds, lack of nurses, lack of adequate house staffs, but no lack of medically indigent patients.

(Continued from Page 644)

meet their health care needs. I am indeed grateful to know of this program. In health as elsewhere in American life, our summons to greatness calls for a lively partnership of individual effort, with action by voluntary agencies and private enterprise and, where necessary, government action at appropriate levels.

As civilization expands, of course, there are many other kinds of challenges — to medicine and to society.

In the beginnings, at the time of Homer, activity and good habits meant good health. We read "that with no aids against bad health, health was generally good because of good habits which neither indolence nor luxury had vitiated."

So — we are constantly called upon for new assessment of our environment, imagination and effort to force and prevent, or to recognize and conquer, these changing problems.

Three thousand years later, an American physician, Dr. George Miller Beard, was writing about diseases that today we would call neuroses. He observed:

"They all occur under similar conditions, and in similar temperaments. They are all diseases of civilization, and of modern civilization and mainly of the 19th century, and of the United States."

Increasing speed of transportation has forced us to revise immigration practices to protect against certain contagious diseases.

Here at home, the rising curve of highway deaths and injuries is another reminder that progress on one front is overlaid by tragedy on another. More than 2.8 million Americans were killed or injured in 1958 alone. Since the automobile first coughed and crawled onto the road, the ranks of its injured and dead have included more than 60 million of us.

Elsewhere new industries present new health hazards in the form of occupational diseases. Millions are exposed to new health risks brought on by an exploding urbanization bringing with it contamination of the air and pollution of our streams.

In an age of ceaseless challenge our society looks to, and understandably expects from, the medical profession a dynamic response. Accelerated progress must lead to the mastery not only of the newer threats to human health and vigor, but the age-old scourges of cancer, dis-

(Continued on Page 654)

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(Continued from Page 652)

eases of the heart and mind, and disorders of the central nervous system.

And let us not forget the common cold. Medicine provides one field in which all humankind can unite against a common enemy — disease. And beyond and above this battle, we must still tirelessly work to overcome the most menacing of all our maladies, the social sickness of war and the untold suffering it brings upon us.

Members of the medical profession, peace and enoblement of the human spirit are the common aims of free societies. True to our country, to the cause of freedom and to our God, we shall pursue these aims, without ceasing or tiring. So doing, we shall one day establish a durable world community of peace-loving nations in which suffering born of strife will be known no more. In bringing about this happy result, no one can or will do more than the doctors of medicine.

AMA PUBLICATIONS — MEMBERSHIP BENEFITS

THE HOUSE of Delegates of the American Medical Association on decision of the board of trustees and amendment to the by-laws adopted, has determined that membership dues will include subscriptions to The Journal of the American Medical Association, the AMA News, Today's Health and any one of the AMA specialty journals of the members choice.

JESSE D. HAMER, M.D.,

Arizona Delegate to AMA

THE ARIZONA MEDICAL ASSOCIATION, INC.

LOCATION INQUIRIES

BOBECK, CHARLES J., M.D., 48 North Main St., Canandaigua, N. Y.; *GS;* 1936 graduate of the University of Rochester, School of Medicine; two years rotating internship at Genesse Hospital and Strong Memorial Hospital in Rochester, N. Y.; served residencies at Genesse Hospital, Clifton Spring Sanitarium and Clinic; holds license in State of New York; fulfilled military obligations; interested in group or associate practice; age 49; married; available July 1, 1959.

CARMAN, GEORGE HENRY, M.D., 1338 Bryan Ave., Salt Lake City, Utah; *I;* 1951 graduate of Cornell University Medical School; interned at Barnes Hospital in St. Louis, Mo.; served residencies at Barnes Hospital, Salt Lake General Hospital and Salt Lake VA Hospitals; fulfilled military obligations; holds license in State of Utah; interested in clinic, assistant or associate practice; age 31; single; available July 1, 1959.

CLAPP, PAUL, M.D., Dothan Road, White River Junction, Vt.; *GS;* 1952 graduate of Harvard Medical School; interned at New York Hospital in New York City; served residencies at New York Hospital and Dartmouth Hospital; fulfilled military obligations; interested in group or associate practice; age 36; married; available Feb. 1, 1960.

CLARK, ROSS JAMES, M.D., 2851 Brentwood Road NE, Washington 18, D. C.; *Ob-Gyn;* 1956 graduate of Harvard Medical School; interned at George Washington University Hospital in Washington, D. C.; served residency at D. C. General Hospital and Freedmans Hospital (rotating); fulfilled military obligations; holds license in District of Columbia and Maryland; interested in assistant or associate practice; age 31; married; available July 1, 1961.

CLOTHIER, BARRY A., M.D., 523 "F" Street, Salt Lake City, Utah; *GP;* 1958 graduate of University of Utah Medical School; interned at Salt Lake General Hospital; military status — current student deferment; interested in group, assistant or associate practice; age 27; married; available Sept. 1, 1959.

CROZIER, WALLACE ALLEN, M.D., 5219 Halsey, Shawnee, Kan.; *Pd;* 1955 graduate of the University of Colorado Medical School; interned at Kansas City General #1; served residency at Children's Mercy Hospital in Kansas City, Mo.; fulfilled military obligations; holds license in State of Colorado; interested in group practice — would consider partnership, solo or institutional practice; age 30; married; available July 1960.

DETJEN, EDWARD, M.D., Bigfork, Minn.; *GP;* 1943 graduate of Wisconsin Medical School;

interned at John Sealy University of Texas in Galveston; holds license in states of Wisconsin and Minnesota; fulfilled military obligations; interested in group, assistant or associate practice; age 41; married; available immediately.

DISHON, MARGARET PEOPLES, M.D., 103 Erskine Place, San Antonio, Tex.; *GM;* 1956 graduate of Ohio State University Medical School; interned at St. Rita's Hospital in Lima, Ohio; 3 years extern at Children's Hospital in Columbus, Ohio; 3 months post graduate work at St. Joseph's Hospital in Flint, Mich.; holds license in State of Ohio; interested in group practice; age 35; married; available Aug. 1, 1959.

DISHON, NEIL H., M.D., 103 Erskine Place, San Antonio, Tex.; *GM;* 1956 graduate of Ohio State University Medical School; interned at St. Rita's Hospital in Lima, Ohio; 3 years extern at Children's Hospital in Columbus, Ohio; 3 months post graduate work at St. Joseph's Hospital in Flint, Mich.; holds license in State of Ohio; fulfilled military obligations; interested in group practice; age 34; married; available Aug. 1, 1959.

FRYER, RONALD E., M.D., 33131 Klein Ave., Fraser, Mich.; *Ob-Gyn;* 1952 graduate of Royal College of Physicians of London; interned at London Hospital and Brighton General; served residency at St. Joseph Hospital in Ann Arbor, Mich. and Grace Hospital in Detroit, Mich.; holds licenses in states of Michigan and Ohio; fulfilled military obligations; interested in group practice; age 33; single; available immediately.

GRAUSE, THOMAS J., M.D., 112 Sunset, Warrington, Fla.; *Ob-Gyn;* 1952 graduate of University of Cincinnati College of Medicine; interned at Los Angeles County Hospital; served residency at Cincinnati General Hospital in Cincinnati, Ohio and The Mount Sinai Hospital in New York City; holds license in State of Ohio; military status — on active duty; interested in clinic, assistant or associate practice; age 35; married; available August 1959.

HANDY, JR., RICHARD, M.D., 906 Stiles Ave., Youngstown, Ohio; *S;* 1954 graduate of Meharry Medical School in Nashville, Tennessee; interned and served residency at Youngstown Hospital Association in Youngstown, Ohio; holds licenses in states of Kentucky and Ohio; fulfilled military obligations; age 33; married; race, Negro; interested in group, assistant or institutional practice; available July 10, 1959.

JACKS, NATHAN BENJAMIN, M.D., 900 Giles East, Windsor, Ontario, Canada; *PH;* 1939 graduate of University of Toronto Medical School; interned at Mt. Sinai Hospital in Toronto; interested in public health service or would consider institutional practice; age 44; married; available Dec. 15, 1959.

LANGSJOEN, PER H., M.D., 3408 Diamond, El Paso, Tex.; *Ca-I;* 1950 graduate of the University of Minnesota School; interned and served residency at Letterman Army Hospital in San Francisco, Calif.; military status — presently in active service; holds license in State of Minnesota; interested in clinic, assistant or associate practice; age 38; married; available immediately.

LEVINE, STANLEY DAVID, M.D., 1845 Parker Road, Minneapolis 26, Minn.; *Ob-Gyn;* 1954 graduate of State University of Iowa Medical School; interned and served residency at Jefferson Davis Hospital in Houston, Tex.; holds license in State of Iowa; fulfilled military obligations; interested in group or associate practice; age 30; married; available July 1, 1960.

LIPSCHUTZ, HAROLD, M.D., 8624 South Maryland Ave., Chicago, Ill.; *R;* 1954 graduate of Jefferson Medical College of Philadelphia; interned at Albert Einstein Medical Center Southern Division in Philadelphia; served residency at U. S. Veterans' Hospital in Philadelphia (radiology including nuclear medicine); holds licenses in states of Illinois, Indiana, California and Pennsylvania; fulfilled military obligations; interested in assoeiate, partnership or hospital practice; age 33; single; available immediately.

MAHONEY, RICHARD EDWARD, M.D., 85 East Birch Lane, Rommey, W. Va.; *S;* 1945 graduate of Tufts College of Medicine; interned at U. S. Naval Hospital in Portsmouth, Va.; served residencies at General Elyria Hospital in Elyria, Ohio and St. Alexis Hospital in Cleveland; holds licenses in states of Massachusetts, California and National Board of Medical Examiners; fulfilled military obligations; interested in group or associate practice; age 38; married; available immediately.

MILLER, HOWARD, M.D., 106 Martin Drive, Walker Village, Killeen, Tex.; *I;* 1955 graduate of State University of New York Medical School; interned at Denver General Hospital; served residency at St. Luke's Presbyterian and Colorado General Hospitals in Denver; holds license in State of Colorado; fulfilled military obligations; interested in group or associate practice; age 31; married; available July 6, 1960.

ROBINSON, RALPH M., M.D., Box 19, Fort Logan, Colo.; *S;* 1954 graduate of the Medical College of Virginia; interned at University of Minnesota Hospitals in Minneapolis; served residency at VA Hospital in Denver; holds license in State of Colorado; fulfilled military obligations; interested in clinic practice; age 32; married; available July 1, 1959.

ROBINSON, SAM LESLIE, M.D., University Medical Center, Jackson, Miss.; S; 1953 graduate of the University of Tennessee Medical School; interned at John Gaston Hospital in Memphis; served residency at University of Mississippi Medical Center in Jackson; holds licenses in states of Tennessee and Misissippi; fulfilled military obligations; interested in assistant or associate practice; age 30; married; available July 1961.

SCHWARTZ, WILLIAM, M.D., 1 Peach Tree Lane, Hicksville, N. Y.; *Pd;* 1950 graduate of The Chicago Medical School; interned at Coney Island Hospital in Brooklyn; served residency at Maimonides Hospital in Brooklyn; holds license in State of New York; interested in assistant or associate practice; age 36; married; available September-October 1959.

SHOEMAKER, RICHARD L., M.D., 211 East A Street, Gas City, Ind.; *GP;* 1954 graduate of Indiana University Medical School; interned at Indianapolis General Hospital; holds license in State of Indiana — applied for license in State of Arizona; fulfilled military obligations; interested in assistant or associate practice; age 30; married; available October 1959.

TOKE, J. N. R., M.D., Fairfield State Hospital, Newtown, Conn.; *GP-P;* 1949 graduate of London University Medical School; interned at Hacuney Hospital in London; served residency at Fairfield State Hospital; age 35; married; available immediately.

WEHLING, BENJAMIN BIRD, M.D., 5852 Kungle Road, Clinton, Ohio; *Anes;* 1944 graduate of University of Maryland Medical School; interned at City Hospital in Akron, Ohio; served residency at St. Catherines Hospital in Brooklyn and Western Reserve University in Cleveland, Ohio; fulfilled military obligations; holds licenses in states of Maryland and Ohio; interested in group, associate or institutional practice; age 40; married; available — 60 days.

LOCATION OPPORTUNITIES

ASHFORK — Population 700 — North centrally located — Railroad center — Contact the Women's Club, Ashfork, Ariz.

CAMP VERDE — Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R. N., Camp Verde, Ariz.

EL MIRAGE — Population 2,000 — including the trading areas of Surprise, Youngtown, Peoria and Luke Air Force Base — the population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving, with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available and in the area surrounding El Mirage from Glendale (nine miles) to the east, and Wickenburg (35 miles) to the west there are only two doctors to serve this community. The need for an M.D. and/or surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Ariz.

GILA BEND — Population 2,500 — 80 miles west of Phoenix — Nearest town to the Painted Rock Dam Project — Good opportunity for GP. Cattle, cotton and general farming. Office and equipment available. $150 monthly income from board of supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

GLOBE — Population 10,000, including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about one hour by car from either Tucson or Phoenix. No ENT man in the area. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad St., Globe, Ariz., or Ellis L. Pollock, M.D., Miami Inspiration Hospital, Miami, Ariz.

HAYDEN — Population 3,000-4,000 — Industrial practice — approximately 200 employes and dependents. Only part-time required. Coverage; Metropolitan Surgical Plan. Physician may engage in private practice also. Small company-owned clinical building (new) available for use, with X-ray equipment, diathermy, equipment, etc. Full-time nurse available to assist; clerical work to be handled by company. Company housing facilities available for physician —

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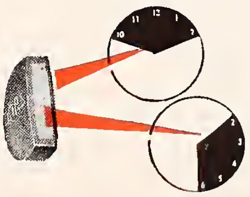

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References: 1. Lhotka, F. M.: Illinois M. J. 112: 259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

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MIAMI — Opportunity for GP — Industrial hospital staffed by approximately seven doctors, who care for personnel and families of those who work for the three principal mining companies. Community served by many mining and ranching interests. Contact Robert V. Horan, M.D., Miami Inspiration Hospital, Miami, Ariz.

MORENCI — Mining community near New Mexico-Arizona border. Population 10,000. Has vacancy at hospital for GP. Contact Carl H. Gans, M.D., Morenci Hospital, Morenci, Ariz.

PAGE — Population growing by leaps and bounds at the site of the new Glen Canyon Dam project. Current estimates are 6,000 to 8,000 total. Only one M.D. is now located in Page and he has facility available. Located about 90 miles north of Flagstaff, Ariz., the building project is estimated to be concluded in 10 years. Write Ivan W. Kazan, M.D., 6th Ave. & S. Navajo, Page, Ariz., for full details.

PAYSON — Staff doctor for small country clinic hospital. Located in the heart of one of the fastest growing residential, recreational areas in the state. One hundred miles northeast of Phoenix on fine, paved, scenic highway, this clinic, operational two years, has been forced to expand into a 12-bed hospital, with facilities for further expansion at an early date. Wonderful opportunity for large and rapidly growing private practice. Elevation, 5,000 feet. Fine year 'round climate, excellent for asthmatics. Surrounding country is forested and abounds in fish and game, with excellent facilities for camping, riding and hiking. For further information, contact Mrs. Edward Taylor, Section Payson Clinic Inc., Payson, Ariz.

PHOENIX — State Department of Health — Child Development Center. Opportunity for doctor of medicine (Pd) with three years' experience. Male or female. Monthly salary $690 — full time. Operation includes (a) a doctor of medicine (Pd); (b) two or three psychologists on a consultant basis; (b) a psychiatric social worker; (d) a teacher specializing in child development; and (e) clerical people as required. Scope: Mentally retarded or emotional problems of preschool children. Available July 1, 1959. Contact Mr. Thomas Golden, Arizona Merit System, 11 North 17th Ave., Phoenix, Ariz. (ALpine 3-3189)

ST. JOHNS — Seriously need a doctor of medicine, preferably a GP, in this east central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

TOLLESON — In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 9112 W. Van Buren St., Tolleson, Ariz.

TUCSON — The VA Hospital is in urgent need of an orthopedic surgeon. They prefer someone who is board certified, but would take someone who has had special training as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact S. Netzer, M.D., Director, Professional Service, VA Hospital, Tucson, Ariz.

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Women's Auxiliary

REPORT OF THE NATIONAL CONVENTION, ATLANTIC CITY, N. J.

Mrs. Hiram D. Cochran, President

ATLANTIC CITY truly lived up to its name of Convention City for the 1959 AMA annual meeting. There were 13,143 physicians and 19,739 exhibitors and guests registered. This was the biggest physician attendance at an Atlantic City AMA meeting since the association centennial there in 1947. Nearly 1,500 doctors' wives registered for the 36th annual meeting of the Women's Auxiliary to the American Medical Association. The weather was perfect for the entire week, and the entertainment as provided by Mrs. Allman and her committees was superb.

In addition to the president, Arizona delegates were Mrs. Jesse Hamer and Mrs. Leslie Kober, of Phoenix.

The amendment to Article 5, Section 3 of the by-laws which Arizona proposed was adopted, and this entire section pertaining to re-instatement of members will now be deleted from the by-laws. During the discussion period on this subject, the delegates from Arizona were very happy to find that with the exception of only one state, we had the backing and approval of the entire house of delegates.

At the luncheon given by the Today's Health staff honoring the states with the highest subscriptions, which I was privileged to attend, it was announced that after July 1, 1959, Today's Health would no longer be handled through the Auxiliary. From now on, each physician will receive a subscription for the waiting room as a part of his AMA dues, just as he receives the AMA Journal and AMA News.

Of course, one of the high high-lights of the meeting was the presence of President Eisenhower as featured guest and special speaker at the inauguration of Dr. Louis M. Orr of Orlando, Fla. as AMA's 113th president.

Some of the outstanding speakers to the Auxiliary were Lt. Col. Ingalls H. Simmons, who spoke on civil defense; Dr. George Fister, who spoke on legislation; and Dr. Marvin Block, chairman of the committee on alcoholism, AMA Council on Mental Health.

Mrs. Frank Gastineau was installed as president, and stated that all of the goals of the Auxiliary can be reached if we are willing to accept "individual responsibility for better community health." We need every member giving her knowledge, her creative ability and her energy to the Auxiliary program.

It was, as always, a wonderful experience and privilege for me to attend another meeting as one of Arizona's representatives.

PAST PRESIDENT'S REPORT

Highlighting an active and productive 1958-59 Auxiliary year, a contribution of over $1,500 topped the national goal for Arizona and represented full participation with each county conducting various money raising methods to meet our quota for support of medical schools through the American Medical Education Foundation.

Reports of community service hours indicated generous volunteer assistance to health and welfare agencies throughout the state. Financial as well as service aid in philanthropic programs was given in receptive locales in addition to specific Auxiliary projects with the smaller counties generally contributing to numerous causes and the larger counties leaning toward larger contributions to select services. Hospital services were commonly contributed.

Legislative contact in support of the Jenkins-Keogh bill was empasized, and local legislative promotion centered around high school driver education.

Recruitment for paramedical careers continues to be an outstanding phase of our program. The film produced by the Maricopa Auxiliary has been widely used in Arizona, and we proudly complied with national's request to preview it for the national convention in Atlantic City.

All counties participated in mental health activities, with Pima taking the lead in representation at the president's conference on the aged. Co-operation with local groups made service in many fields possible.

Another outstanding program in civil defense placed emphasis on immunizations and courses in home nursing, first aid and survival aid.

Reviewing past accomplishments serves only as a springboard for the achievements that lie ahead as we prepare for the new season with new leadership in the same quality Auxiliary program.

MRS. MELVIN W. PHILLIPS,
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Investigators cite this new antihistamine's lack of side effects, its speed of action and its excellent tolerance. Nineteen investigators have treated over 800 patients with ALLERCUR. In 297 recent cases, 91% were side-effect-free. ALLERCUR is supplied in bottles of 100 scored tablets, each containing 20 mg. Clemizole HCl. Average dose is 2 to 4 tablets daily.

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Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.	6.5 mg.
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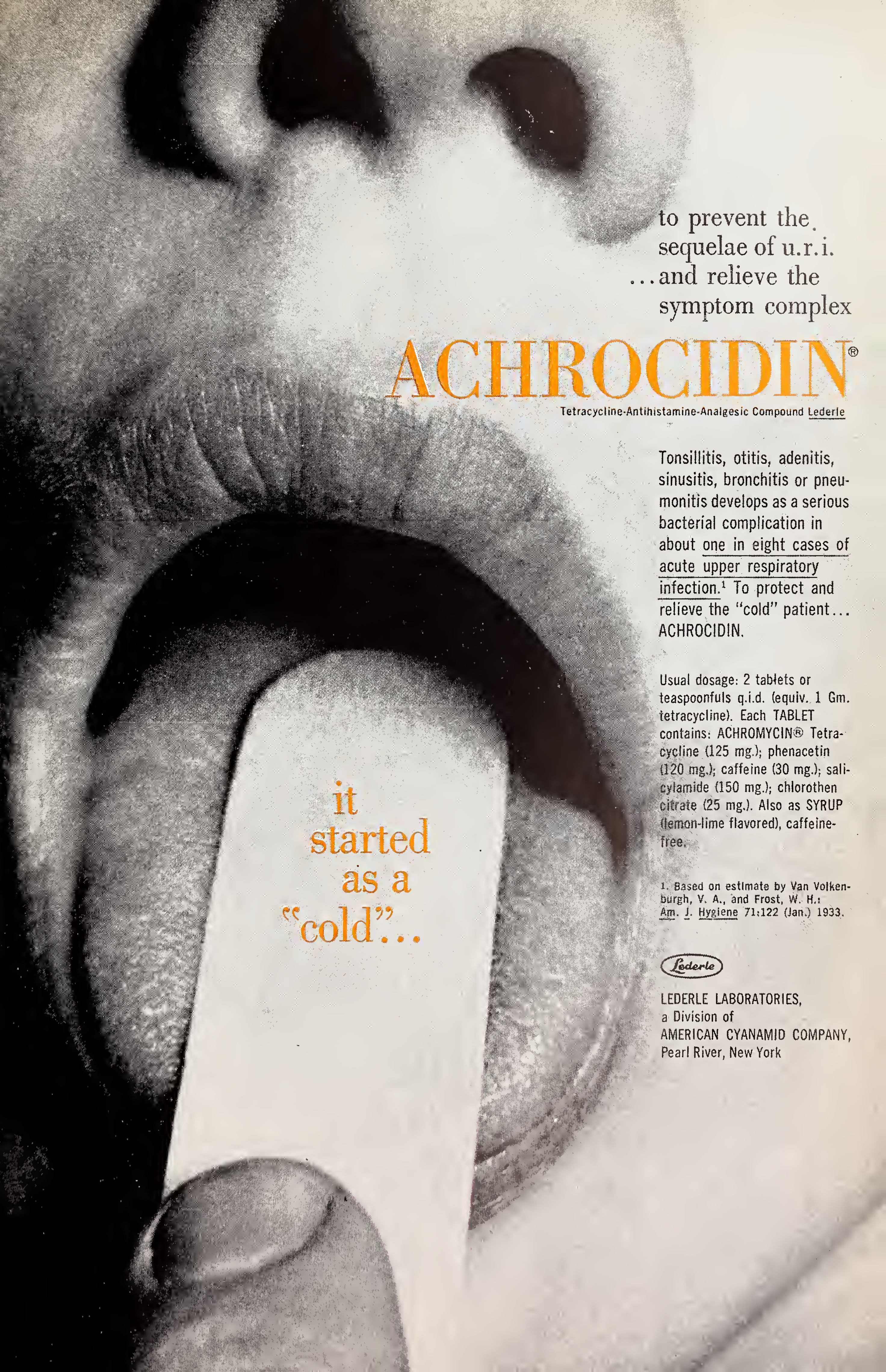
it started as a "cold"...

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[1] Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933.

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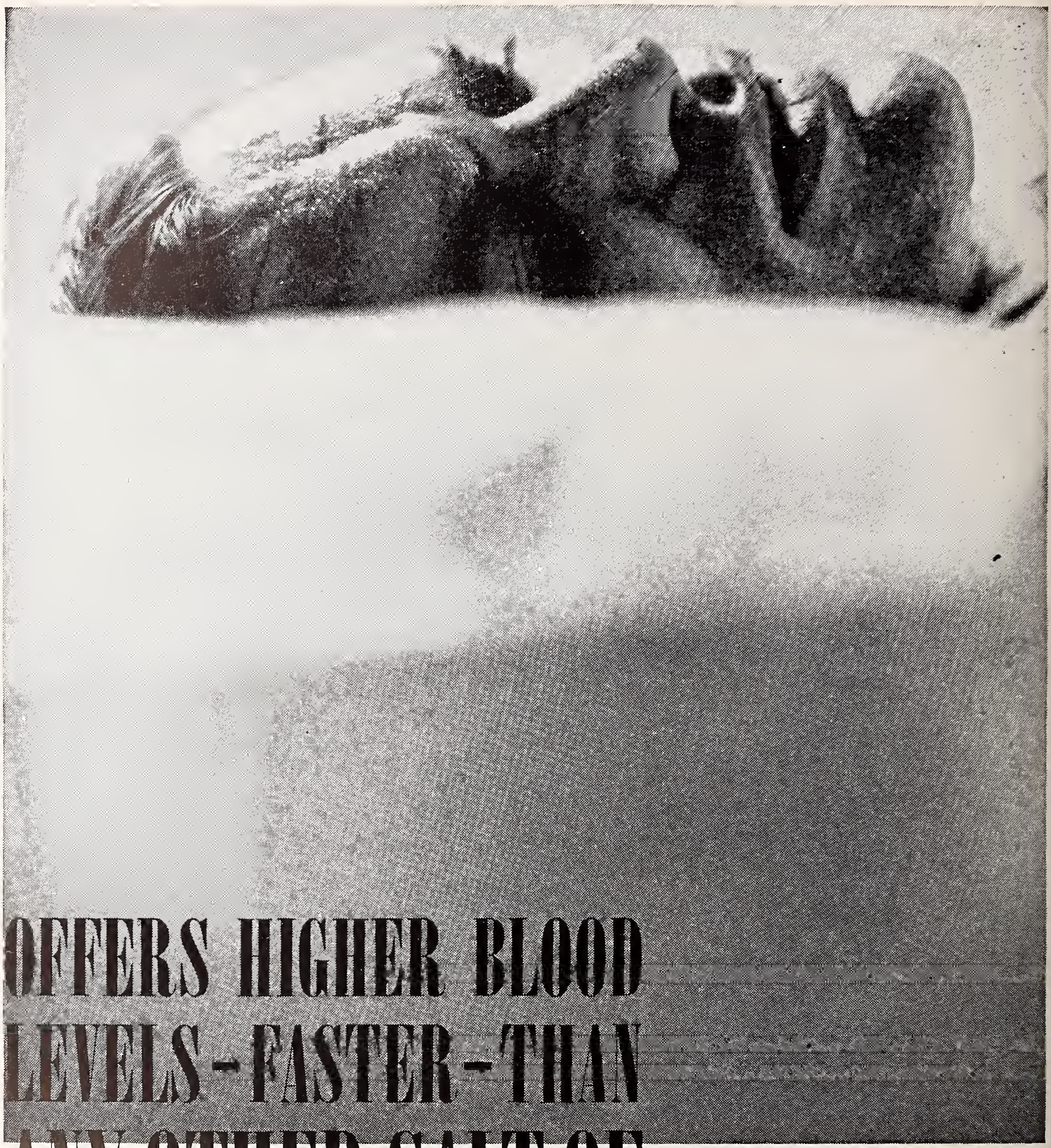

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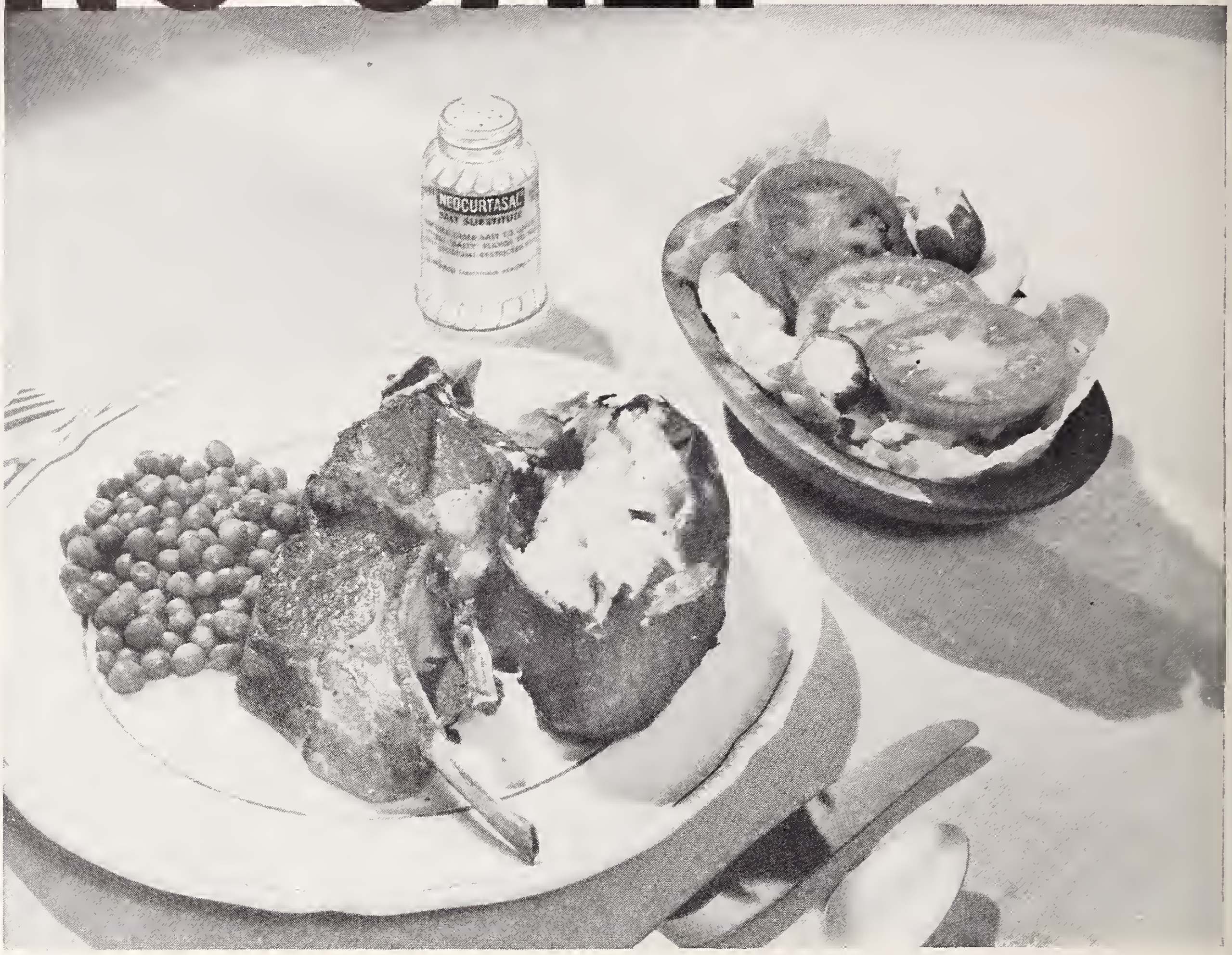

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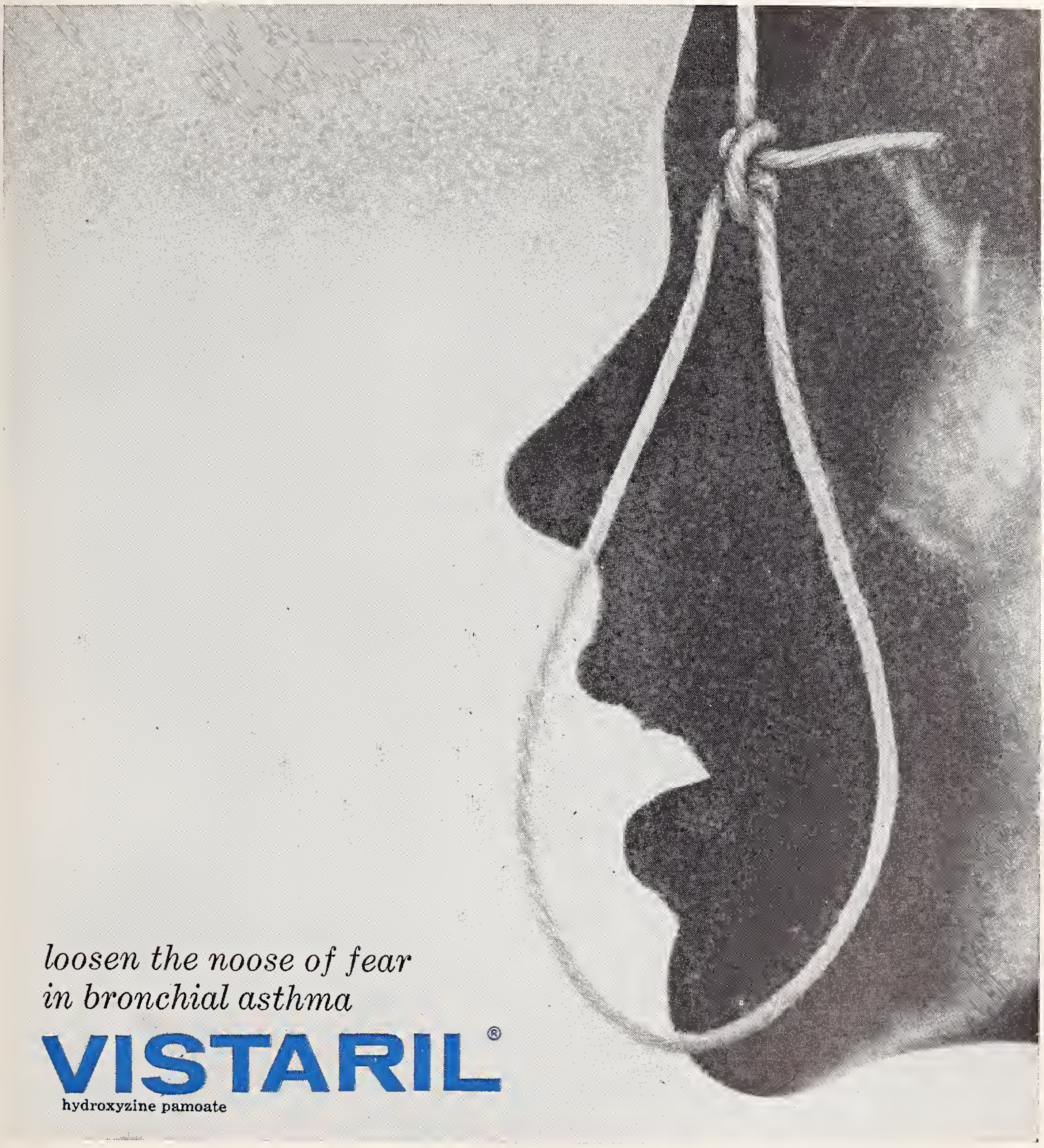

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References: 1. Menger, H. C.: Clin. Med. 4:313 (March) 1957. 2. Charles, G. M.: Geriatrics 2:110 (March) 1956. 3. Shuster, B. H.: M. Clin. North America 40:1787 (Nov.) 1956. 4. Dolowitz, D. A.: Rocky Mountain M. J. 55:53 (Oct.) 1958.

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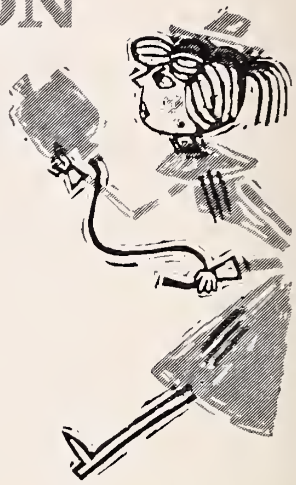

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Kasdon, S. C., Morentin, B. O.: J. Internat. Coll. Surgeons 31:455 (Apr.) 1959.

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Terpin hydrate	180 mg.
APAP (N-acetyl-p-aminophenol)	325 mg.

References: 1. Lhotka, F. M.: Illinois M. J. **112**:259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly **37**:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. **5**:1185 (Sept.) 1958. 4. Bonica, J. J.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 272. 5. Dascomb, H. E.: in Current Therapy, Saunders, Phila., 1958, p.78. 6. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p.547.

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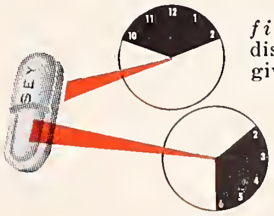

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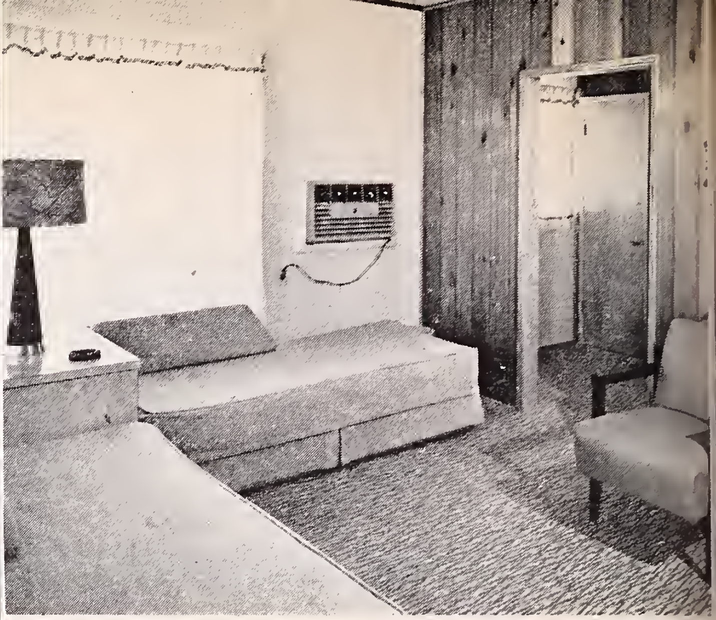

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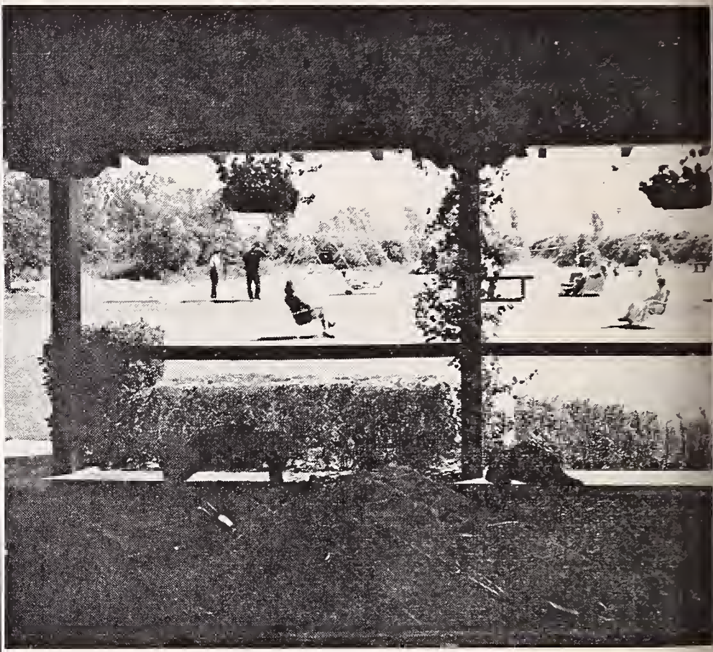

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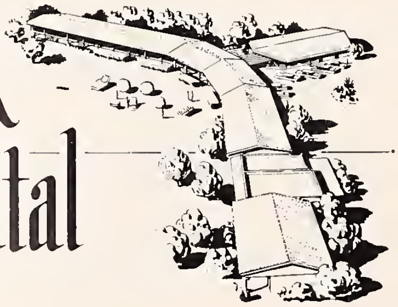

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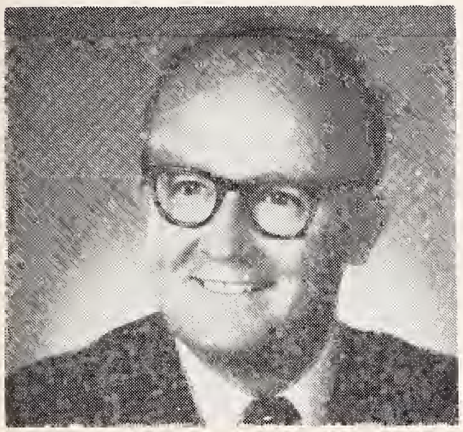

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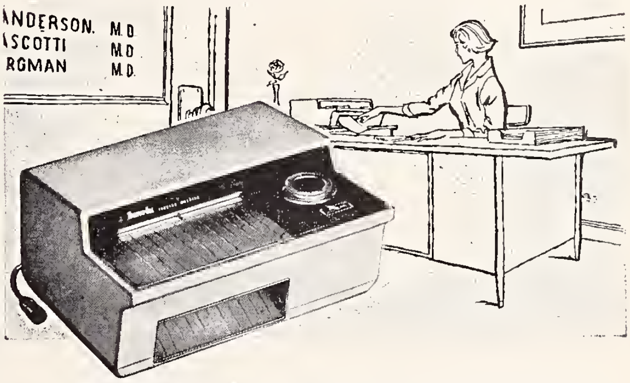

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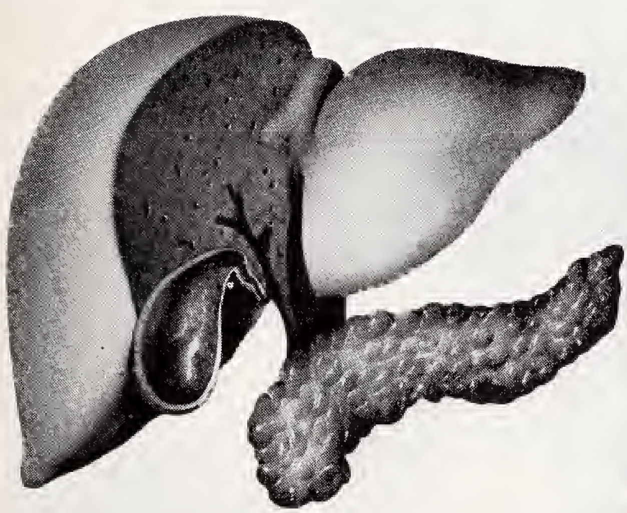

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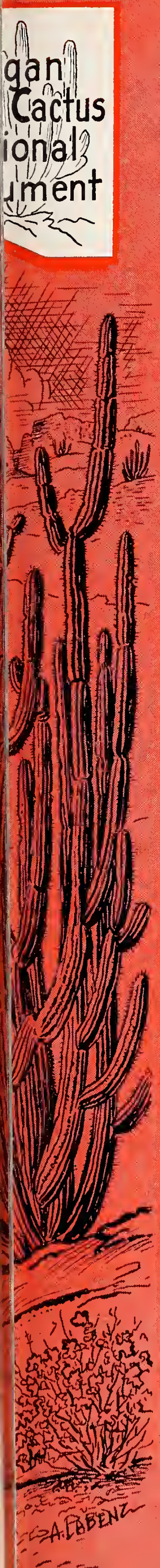

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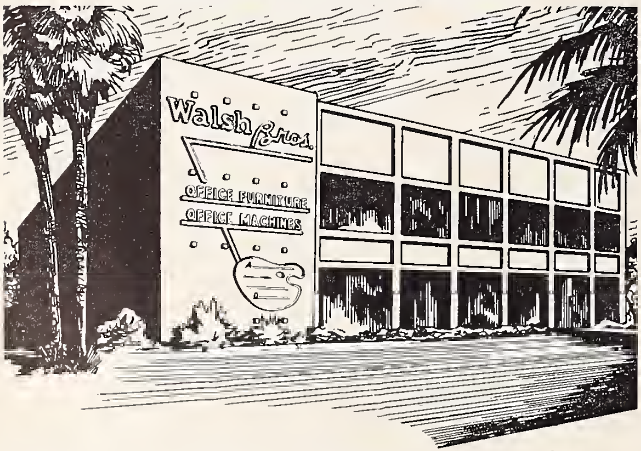

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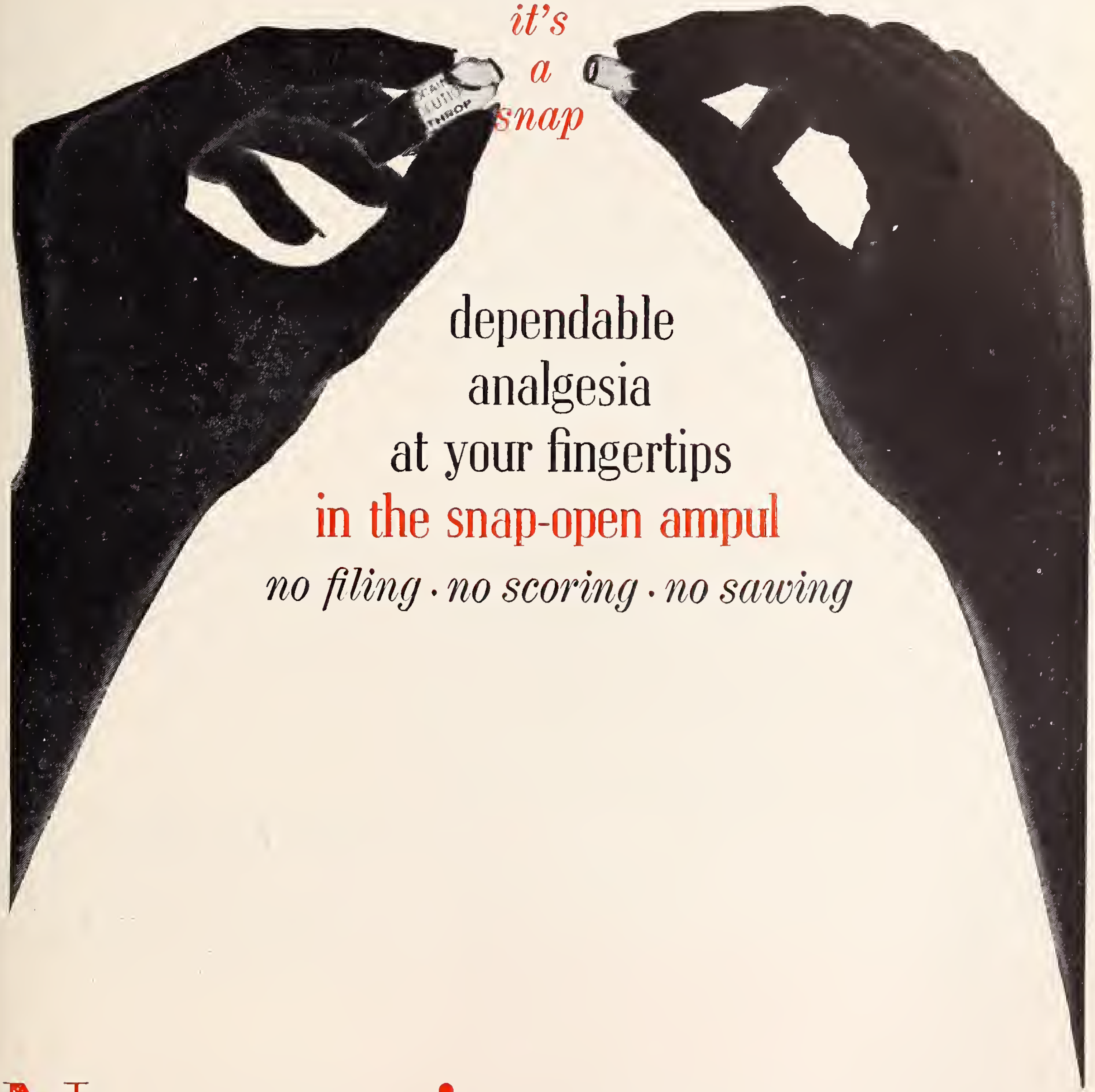

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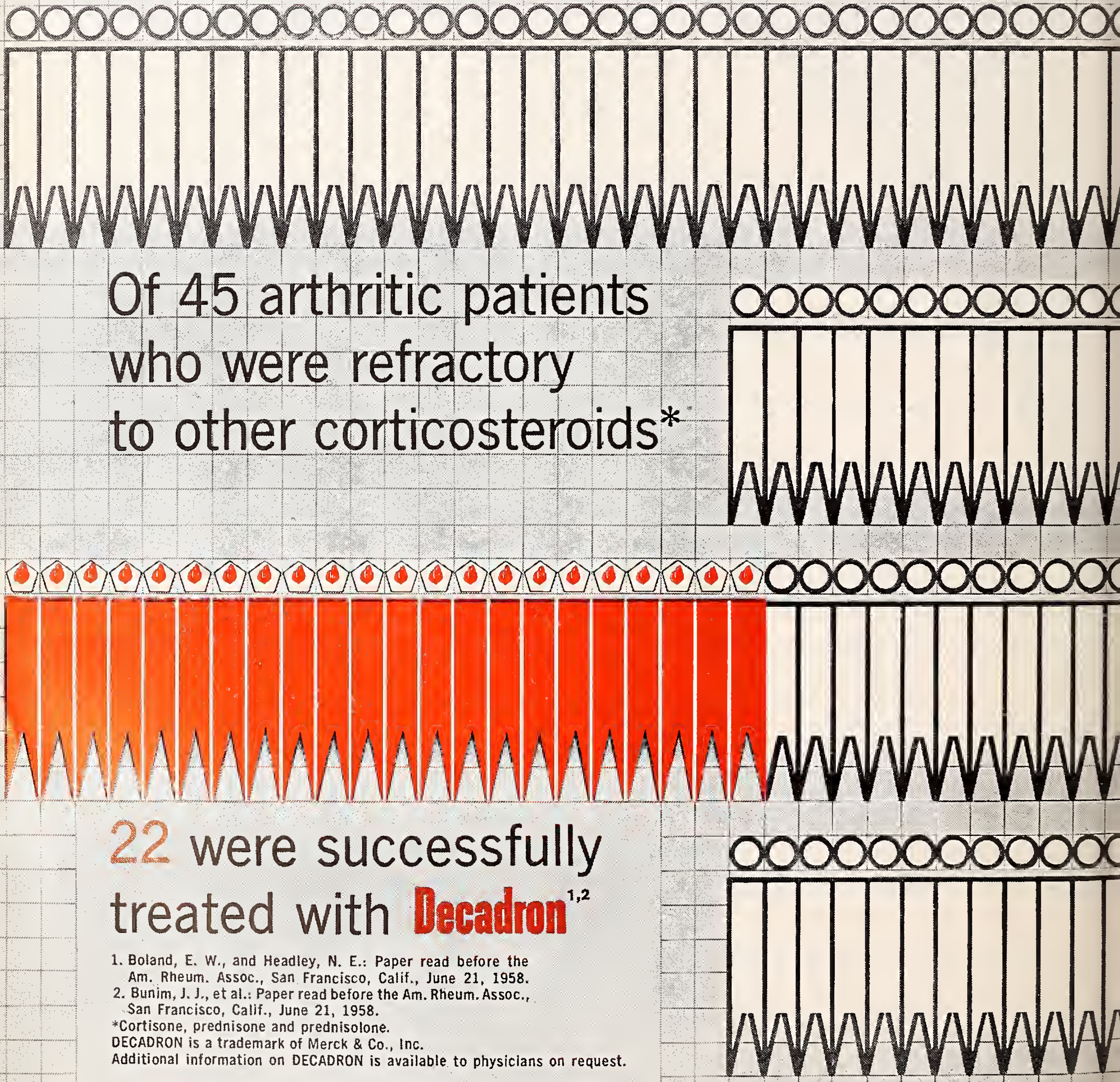

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Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

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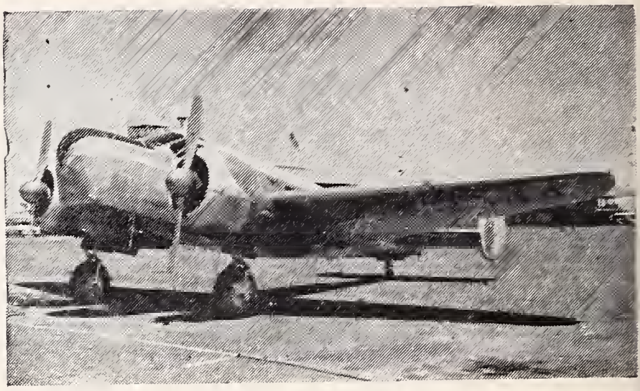

DAY OR NIGHT
TWIN-ENGINE AIR-AMBULANCE SERVICE

Almost any point in Arizona is within one hour of Phoenix by our oxygen-equipped air-ambulance. Twin engine dependability for up to three patients at your service no matter what the hour.

Motor- ambulance service, too, is always instantly available.

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TWO FINE STORES

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FREE DELIVERY

*for
the
tense
and
nervous
patient*

relief comes fast and comfortably

–does not produce autonomic side reactions
–does not impair mental efficiency, motor control, or normal behavior.

Usual Dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets or as MEPROTABS*–400 mg. *unmarked,* coated tablets.

Miltown®

meprobamate (Wallace)

WALLACE LABORATORIES / *New Brunswick, N. J.*

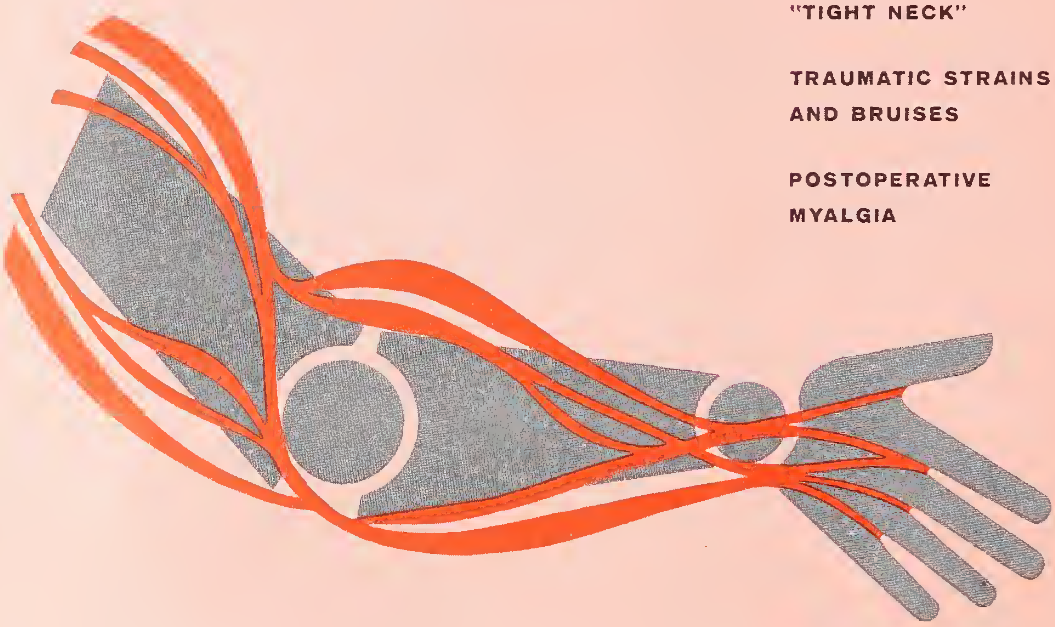
CM-9470

NOW

. . . a new way to relieve pain and stiffness in muscles and joints

indicated in:

- MUSCLE STIFFNESS
- LUMBOSACRAL STRAIN
- SACROILIAC STRAIN
- WHIPLASH INJURY
- BURSITIS
- SPRAINS
- TENOSYNOVITIS
- FIBROSITIS
- FIBROMYOSITIS
- LOW BACK PAIN
- DISC SYNDROME
- SPRAINED BACK
- "TIGHT NECK"
- TRAUMATIC STRAINS AND BRUISES
- POSTOPERATIVE MYALGIA



■ Exhibits unusual analgesic properties, different from those of any other drug ■ Specific and superior in relief of SOMAtic pain ■ Modifies central perception of pain without abolishing natural defense reflexes ■ Relaxes abnormal tension of skeletal muscle

SOMA T.M.

N-isopropyl-2-methyl-2-propyl-1, 3-propanediol dicarbamate

■ More specific than salicylates ■ Less drastic than steroids

■ More effective than muscle relaxants

SOMA has an unique analgesic action. It apparently modifies central pain perception without abolishing peripheral pain reflexes. SOMA is particularly effective in relieving joint pain. Patients say that they feel better and sleep better with SOMA than with previously used analgesic, sedative or relaxant drugs.
SOMA also relaxes muscle hypertonia, with its stresses on related joints, ligaments and skeletal structures.

ACTS FAST. Pain-relieving and relaxant effects start in 30 minutes and last 6 hours.

NOTABLY SAFE. Toxicity of SOMA is extremely low. No effects on liver, endocrine system, blood pressure, blood picture or urine have been reported. Some patients may become sleepy, particularly on high dosage.

EASY TO USE. Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

SUPPLIED: Bottles of 50 white coated 350 mg. tablets.

Literature and samples on request.

WALLACE LABORATORIES, NEW BRUNSWICK, N. J.

Announcing

'ACTIFED'®

Decongestant / Antihistamine

THE POTENTIATED DECONGESTANT

provides symptomatic relief of nasal congestion and rhinorrhea of allergic or infectious origin Many patients whose symptoms are inadequately controlled by decongestants or antihistamines alone respond promptly and favorably to 'ACTIFED'.

'ACTIFED' contains:	in each Tablet	in each tsp. Syrup
'Actidil'® brand Triprolidine Hydrochloride	2.5 mg.	1.25 mg.
'Sudafed'® brand Pseudoephedrine Hydrochloride	60 mg.	30 mg.

safe and effective for patients of all ages suffering from respiratory tract congestion

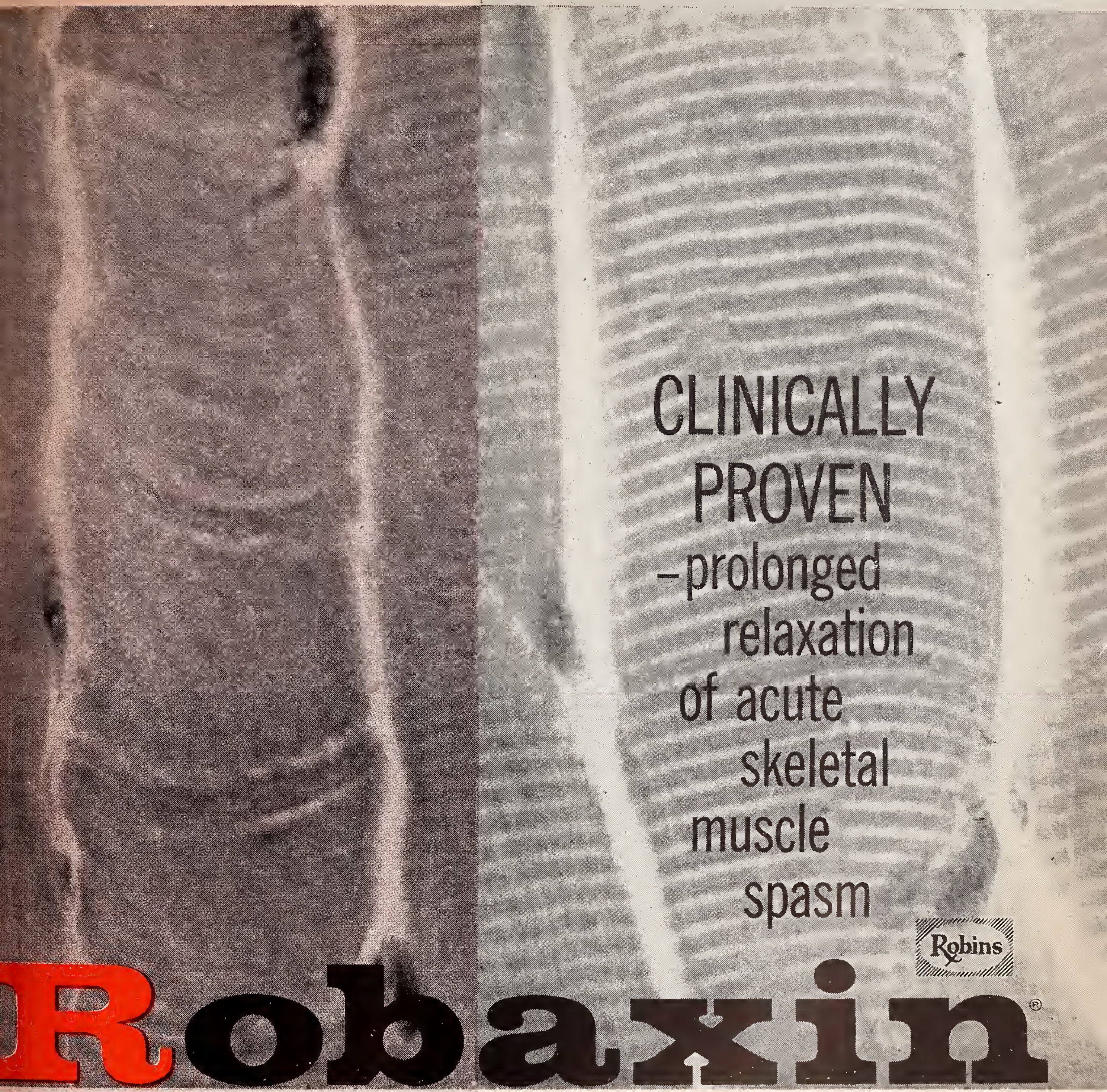
DOSAGE

	TABLETS	SYRUP (5 cc. tsp.)	
Adults and older children	1	2	three times daily
Children 4 months to 6 years of age	½	1	
Infants through 3 months	–	½	

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, New York

Fiber of skeletal muscle in spasm

Fiber of skeletal muscle relaxed *(photomicrographs)*


CLINICALLY PROVEN –prolonged relaxation of acute skeletal muscle spasm
Robins
Robaxin®

Methocarbamol Robins U.S. Pat. No. 2770649

TABLETS

Summary of six published clinical studies:

ROBAXIN BENEFICIAL IN 92.4% OF SKELETAL MUSCLE SPASM CASES

	NO. PATIENTS	RESPONSE			
			moderate	slight	none
Carpenter[1]	33	"marked" 26	6	1	—
Forsyth[2]	58	"pronounced" 37	20	—	1
Lewis[3]	38	"good" 25	6	—	7
O'Doherty & Shields[4]	17	"excellent" 14	2	1	0
Park[5]	30	"significant" 27	—	2	1
Plumb[6]	60	"gratifying" 55	—	—	5
TOTALS	236	184 (78.0%)	34 (14.4%)	4	14

- **Highly potent—and long acting.**[1,2,3]
- **Relatively free of adverse side effects.**[1,2,3,5,6]
- **In ordinary dosage, does not reduce muscle strength or reflex activity.**[1]

REFERENCES: 1. Carpenter, E. B.: Southern M. J. 51:627, 1958. 2. Forsyth, H. F.: J.A.M.A. 167:163, 1958. 3. Lewis, W. B.: California Med. 90:26, 1959. 4. O'Doherty, D. S., and Shields, C. D.: J.A.M.A. 167:160, 1958. 5. Park, H. W.: J.A.M.A. 167:168, 1958. 6. Plumb, C. S.: Journal-Lancet 78:531, 1958.

A. H. ROBINS CO., INC., Richmond 20, Virginia

Ethical Pharmaceuticals of Merit since 1878

what lurks beyond the broad spectrum?

"Broad spectrum" has evolved into an especially apt term to describe a growing number of "specialized" antibiotics. These provide the best means of destroying pathogenic bacteria which range all the way from large protozoa through gram-negative and gram-positive bacteria to certain viruses at the far end of the spectrum.

But beyond the spectrum lurk pathogenic fungi. Aggressive infections often require intensive broad spectrum antibiotic attack. It becomes more apparent every day that fungal superinfections may occur during or following a course of such therapy.[1,2] Long term debilitating disease, diabetes, pregnancy, corticosteroid therapy, and other causes may predispose to such fungal infections[1,3,4] as iatrogenic moniliasis. These facts complicate the administration of antibiotics.

Mysteclin-V controls both — infection and superinfection. Mysteclin-V makes a telling assault on bacterial infections and, in addition, prevents the potentially dangerous monilial overgrowth.[2,5-8] Mysteclin-V is a combination of the phosphate complex of tetracycline — for reliable control of most infections encountered in daily practice — and Mycostatin, the first safe antifungal antibiotic.

Case history after case history marked "recovered" provides clinical evidence of the special merit of this advance in specially designed antibiotics. When you prescribe Mysteclin-V, you provide "broad therapy" with extra protection that extends beyond the spectrum of ordinary antibiotics.

'MYSTECLIN'®, 'SUMYCIN'®, AND 'MYCOSTATIN'® ARE SQUIBB TRADEMARKS

Supplied:	Tetracycline Phosphate Complex equiv. Tetracycline HCl (mg.)	Mycostatin units
Mysteclin-V Capsules (per capsule)	250	250,000
Mysteclin-V Half-Strength Capsules (per capsule)	125	125,000
Mysteclin-V Suspension (per 5 cc.)	125	125,000
Mysteclin-V Pediatric Drops (per cc. – 20 drops)	100	100,000

References: 1. Dowling, H. F.: Postgrad. Med. 23:594 (June) 1958. 2. Gimble, A. I.; Shea, J. G., and Katz, S.: Antibiotics Annual 1955-1956, New York, Medical Encyclopedia Inc., 1956, p. 676. 3. Long, P. H., in Kneeland, Y., Jr., and Wortis, S. B.: Bull. New York Acad. Med. 33:552 (Aug.) 1957. 4. Rein, C. R.; Lewis, L. A., and Dick, L. A.: Antibiotic Med. & Clin. Ther. 4:771 (Dec.) 1957. 5. Stone, M. L., and Mersheimer, W. L.: Antibiotics Annual 1955-1956, New York, Medical Encyclopedia Inc., 1956, p. 862. 6. Campbell, E. A.; Prigot, A., and Dorsey, G. M.: Antibiotic Med. & Clin. Ther. 4:817 (Dec.) 1957. 7. Chamberlain, C.; Burros, H. M., and Borromeo, V.: Antibiotic Med. & Clin. Ther. 5:521 (Aug.) 1958. 8. From, P., and Alli, J. H.: Antibiotic Med. & Clin. Ther. 5:639 (Nov.) 1958.

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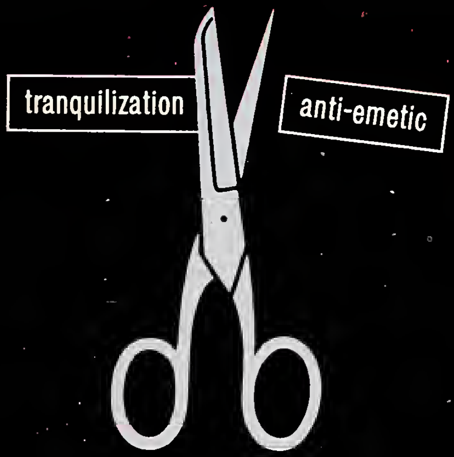
Squibb Quality —
the Priceless Ingredient

now potent tranquilizer therapy is safer than ever



Virtual freedom of Mellaril from major toxic effects is due to greater specificity of tranquilizing action — divorced from such "diffuse" effects as anti-emetic action.

MELLARIL is virtually free of such toxic effects as

- jaundice
- Parkinsonism
- blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. . . . This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."[1]

SANDOZ

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels

remarkable lack of side effects

In more than 3,000 carefully-followed patients, Mellaril has been almost completely free of such major side effects as jaundice, extrapyramidal symptoms, Parkinsonism, blood dyscrasia, dermatitis even when given in quantities far in excess of the usual dosage.

"POVERTY" OF SIDE EFFECTS

"The most striking aspect of thioridazine [Mellaril] therapy is the poverty of side effects.... In its lack of side effects and low toxicity, it is superior to all other tranquilizing drugs tested. For this reason also it is well tolerated by patients, particularly those who are not hospitalized and who frequently discontinue their medication because of dizziness, sleepiness, increased tension or parkinsonism with other drugs."[2]

NEGLIGIBLE SIDE EFFECTS

"Side effects were negligible at all dosage levels: no incidence of parkinsonism or other extrapyramidal symptoms. Minimal sedation, on the whole lower than with other tranquilizing agents. No alteration in liver function, urine or blood. No photosensitivity. Patient acceptability was exceptional: lack of drowsiness, lethargy or 'washed out' feeling, permitted patients to carry on normal everyday activities. Orthostatic hypotension was absent. The initial 'keyed up' tense feeling common to other drugs of this type was absent.... Patients forced to interrupt treatment with other phenothiazine derivatives because of parkinsonism or other extrapyramidal symptoms were able to continue therapy with thioridazine without appearance of parkinsonism."[3]

SINGULARLY FREE OF SIDE EFFECTS

"The extrapyramidal syndrome was not encountered in any of its forms. Dizziness and sleepiness responded to a reduction in dosage. Other side effects did not occur.... It is singularly free from the side effects ordinarily seen with these [phenothiazine] compounds."[4]

ABSENCE OF SIGNIFICANT SIDE EFFECTS

"None of the following toxic effects, so common after administration of the phenothiazines, was present during the period of Thioridazine administration: Parkinsonism or Parkinson-like symptoms, photosensitivity, orthostatic hypotension, bone-marrow depression."[1]

MINIMAL SIDE EFFECTS

"Side effects such as extrapyramidal activity, jaundice and photosensitivity have not been observed in patients treated with Thioridazine [Mellaril]. Extrapyramidal side effects produced by other phenothiazines have disappeared promptly with no deterioration in the behavioral response when these patients have been shifted to Thioridazine."[5]

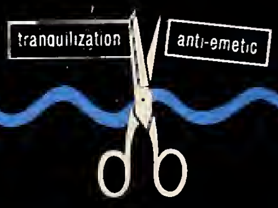
NO JAUNDICE

"No allergic reactions were observed such as skin eruptions, jaundice or agranulocytosis. Central nervous system toxicity, as manifested by extrapyramidal effects, seizures, and excitement did not occur despite the use of high doses (up to 2000 mg.) of the drug."[6]

Mellaril®

THIORIDAZINE HCl

specific, effective tranquilizer • safer at all dosage levels



excellent clinical response

In office practice and in hospitalized patients, Mellaril has proved highly useful for a wide variety of major and minor emotional disorders (such as anxiety, tension, apprehension, alcoholism, agitated psychoneurosis, agitated psychotic states, etc.).

EXTREMELY SATISFACTORY "... produced extremely satisfactory results in the broad therapeutic range represented in this series."[3]

POTENT AGENT "... appears to be a potent agent in the symptomatic management of a variety of psychiatric states."[4]

MAJOR ADDITION TO THERAPEUTICS "This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."[1]

AN ACTIVE AGENT "Thioridazine is an active therapeutic agent. . . . It is [illegible] in a variety of psychiatric disorders, including schizophrenic reacti[illegible]. The drug is particularly advantageous for a group of schizophrenic patien[illegible] are sometimes made worse by other phenothiazine deriv[illegible] or Rauwolfia alkaloids. It should also be suitable for treating patients with [illegible] neuroses and chronic brain syndrome."[6]

EVEN I[illegible] VERY SEVERE CASES "Of the 152 patients treated 25 have been rele[illegible] they have not suffered a relapse. This proportion is significant if w[illegible]onsider that we are dealing only with acute cases which had been con[illegible]peless and obviously destined to finish their days in an asylum."[7]

EXC[illegible]T THERAPEUTIC RESPONSE "Patients with emotional tens[illegible]ting from the stress and strain of life . . . were treated with Mel[illegible] dosage level of 10 mg. three times daily. In 9[illegible]ients, 83 obtained an excellent therapeutic response."[8]

"... extremely satisfactory results ..."
in a clinical spectrum ranging from
minor nervous disorders to
severe psychotic disturbances[3]

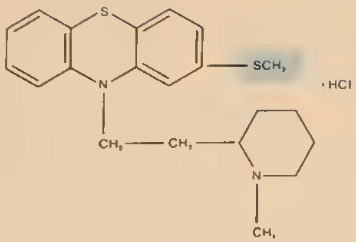
RESULTS WITH MELLARIL IN 194 PATIENTS[3]

ACUTE PSYCHOTICS	CHRONIC PSYCHOTICS	NEUROTICS
83% satisfactory effect	68% satisfactory effect	57% satisfactory effect
Some cases had complete remission of symptoms. Most were able to return home to useful occupations	Relief of symptoms in cases permitted easier management and a return to a more or less useful life	Some cases, complete relief of symptoms. Other cases, partial relief of symptoms.

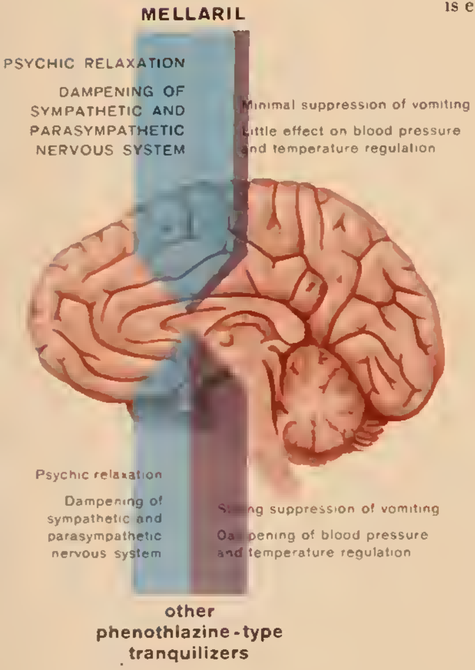
RESULTS WITH MELLARIL IN PATIENTS PREVIOUSLY TREATED WITH OTHER TRANQUILIZERS[3]

DIAGNOSTIC CATEGORY	IMPROVED %	VERY SATISFACTORY %	SATISFACTORY %	UNSATISFACTORY %
SCHIZOPHRENIA				
Acute	89	61	28	11
Chronic paranoid	84.2	31.6	52.6	15.8
Chronic, other	73.9	21.7	52.2	26.1
Residual	57.1	9.5	47.6	42.9
CHRONIC BRAIN SYNDROME	66.6	33.3	33.3	33.3
CHRONIC PSYCHONEUROSIS	62.5	12.5	50	37.5
CHRONIC PSYCHOSOMATIC DISORDERS	75	25	50	25

a new advance in tranquilization:
greater specificity of tranquilizing action plus fewer side effects



Of 109 phenothiazines synthesized by Sandoz, Mellaril was selected as the most promising on the basis of extensive evaluation. The presence of a thiomethyl radical ($S\text{-}CH_3$) in the position conventionally occupied by a halogen in other phenothiazines is unique and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
PSYCHIC RELAXATION
DAMPENING OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM
Minimal suppression of vomiting
Little effect on blood pressure and temperature regulation
Psychic relaxation
Dampening of sympathetic and parasympathetic nervous system
Strong suppression of vomiting
Dampening of blood pressure and temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy, while achieving psychomotor control in mental and emotional disorders.

5 Virtual freedom from toxic effects — jaundice, photosensitivity, skin eruptions, disturbed body temperature regulation, blood forming disorders have been absent in reports currently available.

These properties add up to a greater margin of safety in general office practice, in ambulatory psychiatric out-patient clinics, and in hospitalized patients.

a guide to administration and dosage

Dosage ranges from 10 mg. three or four times a day in milder situations to 25 mg. three or four times a day for more disturbed patients. In ambulatory psychiatric out-patients, dosages of 50 to 100 mg. three or four times a day have been found adequate. For severely disturbed hospitalized psychotics, dosages of 200 to 300 mg. three times a day may be administered.

Dosage must be individualized according to the condition and degree of response. In all cases, the smallest effective dosage should be determined for each patient.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
ADULTS		
Mental and Emotional Disturbances:		
MILD — where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE — where agitation exists in psychoneurosis, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE — in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg
CHILDREN		
BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg

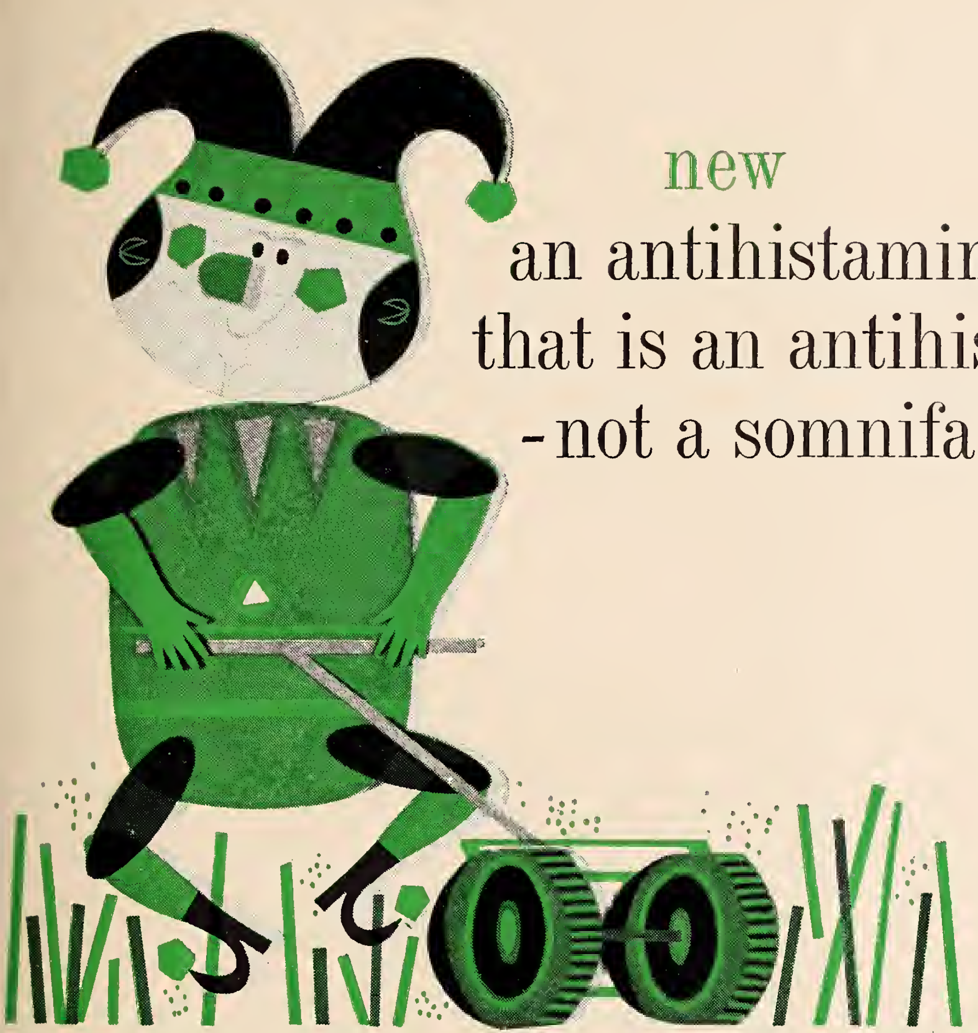
PRECAUTIONS: Although possessing a unique structure and a selectivity of action which broadens its therapeutic ratio, the physician should be alert to the possibility of untoward reactions in certain susceptible individuals. In particular, he should watch for potential hemopoieti depression, jaundice or orthostatic hypotension. As wi other phenothiazines, Mellaril is contraindicated i severely depressed or comatose states from any cause.

SUPPLIED: MELLARIL Tablets, 10 mg., 25 mg., 100 mg. Bottles of 100.

1 Ostfeld, A. M.: Scientific Exhibit, American Academy of General Practice, San Francisco, April 6-9, 1959. 2. Kinross-Wright, V. J.: Lecture, Cl Meeting, American Medical Association, Minneapolis, Dec. 4, 1958. 3. Kinross-Wright, V. J.: Scientific Exhibit, Clinical Meeting, American Medical As ation, Minneapolis, Dec. 2-5, 1958. 4 Cohen, S.: TP-21, a new phenothiazine, Am. J. Psychiat. *115*:358, Oct. 1958. 5. Glueck, B.: Scientific Exhibit, Ame Psychiatric Association, Philadelphia, April 27-May 1, 1959. 6. Hollister, L. E., and Macdonald, B. F.: Presented at California Medical Association, Sectio Psychiatry, San Francisco, Feb. 25, 1959. 7. Remy, M.: Schweiz. med. Wchnschr. 88:1221, Nov. 29, 1958. 8. Freed, S. C., in discussion on Thioridazine (Mell in Psychiatric Patients, Hollister, L. E., and Macdonald, B. F., presented at California Medical Association; Section on Psychiatry, San Francisco, Feb. 25, 19

- controls neurotic and psychotic patients with anxiety, apprehension, nervous tension
- virtual absence of jaundice, parkinsonism, photosensitivity, dermatitis
- minimal sedation and drowsiness
- does not mask organic conditions such as brain tumors, intestinal obstruction etc., because of lack of anti-emetic action
- increased specificity of action results in greater safety at all dosage levels

SANDO



new
an antihistamine
that is an antihistamine
-not a somnifacient

drowsiness *(other side effects)* rare...relief prompt...toxicity low

Investigators cite this new antihistamine's lack of side effects, its speed of action and its excellent tolerance. Nineteen investigators have treated over 800 patients with ALLERCUR. In 297 recent cases, 91% were side-effect-free. ALLERCUR is supplied in bottles of 100 scored tablets, each containing 20 mg. Clemizole HCl. Average dose is 2 to 4 tablets daily.

when allergies occur

℞ ALLERCUR*

(Clemizole HCl)

Roerig *New York 17, New York • Division, Chas. Pfizer & Co., Inc. • Science for the World's Well-Being*

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JUST
ONE
TABLET
DAILY

provides therapeutic sulfa levels for 24 hours... Highly soluble in acid and alkaline media... rapidly absorbed, producing fast, effective plasma-tissue concentrations sustained for the entire day. Simple, single 0.5 Gm. daily dose minimizes patient dosage confusion. At least equivalent to 4 to 6 Gms. daily of previous sulfonamides. Does not produce renal complications.[1]

with low incidence of sensitivity reactions... KYNEX is extremely low in toxic potential.[2,3] Cutaneous or other objective sensitivity reactions are rare, as demonstrated in a large scale evaluation of clinical toxicity.[2] Also minor subjective reactions are less likely to develop when the recommended dosage is used.[2]

Dosage: Adults, 0.5 Gm. (1 tablet) daily following an initial first-day dose of 1 Gm. (2 tablets).

TABLETS, 0.5 Gm., Bottles of 24 and 100.

also available—KYNEX Acetyl Pediatric Suspension, cherry-flavored, 250 mg. sulfamethoxypyridazine activity per teaspoonful (5 cc.). Bottles of 4 and 16 fl. oz.

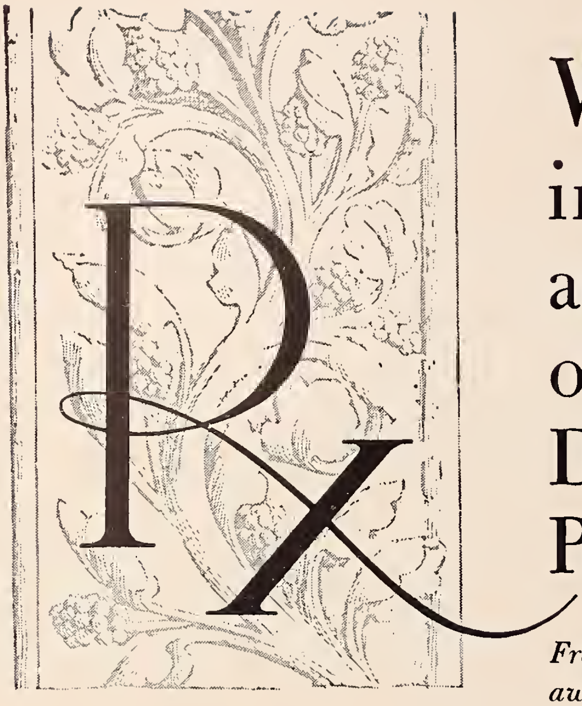
1. Editorial, New England J. Med. 258:48, 1958.
2. Vinnicombe, J.: Antibiotic Med & Clin. Ther. 5:474, 1958.
3. Sheth, U. K., et al.: Ibid., p. 604, 1958.

for improved control
WHENEVER SULFAS ARE INDICATED

KYNEX®

Sulfamethoxypyridazine Lederle

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



WINE in Geriatrics and the treatment of the Anorexic, Debilitated Patient....

From time immemorial physicians have been aware of the restorative powers of wine.

A Tasty Aid to Appetite and Digestion

A glass of Sherry at mealtime stimulates the jaded appetite, serves as a tonic and aids the digestion. As a postprandial or between-meals' beverage, a glass of Port has been warmly recommended for the sick and enfeebled.

Wine has been found to increase salivary flow and stimulate gastric secretion.

A Nutrient in Itself

The ease with which wine is metabolized makes it an important nutritive factor.

A Gentle Vasodilator and Sedative

The systemic sedative and vasodilative actions of wine can be of great aid and comfort to both the aged and the convalescent, particularly in the presence of cardiovascular disease.

These and other therapeutic uses of wine are discussed in the physician's brochure, "Uses of Wine in Medical Practice." For your free copy write—Wine Advisory Board, 717 Market Street, San Francisco 3, California.

Outstanding relief from torticollis and anxiety and tension states with
Trancopal®
THE FIRST TRUE "TRANQUILAXANT"

Here is what you ca
expect when you prescrib

case profile no. 2840*

A 55-year-old man complained of a painful, very stiff neck on the left side. There was marked muscle spasm that seemed to involve primarily the trapezius muscle. He had a severe headache, with the pain radiating down the left side of the neck to the shoulder. There were no other findings on physical examination and results of routine laboratory tests were normal.

Trancopal was prescribed in a dosage of 200 mg. q.i.d. The first and second dose of Trancopal gave only moderate relief. However, after the third dose, there was marked relief of the stiffness of the neck, as well as the headache and shoulder pain.

After the fourth dose, medication was gradually decreased and was discontinued on the sixth day. One week later, the patient had moderate recurrence of the torticollis, and Trancopal was again prescribed in doses of 200 mg. q.i.d. The patient obtained complete relief in one day and no further treatment was required.

for torticollis

THE FIRST TRUE "TRANQUILAXANT"

Trancopal®

for anxiety and tension states

case profile no. 3382*

A 35-year-old woman, a professional model, had an acute, severe attack of anxiety. She was irrational and unable to eat, and was very restless.

Initial medication consisted of aspirin with codeine and later meprobamate. Neither was effective, and the patient's condition became worse. She had to be hospitalized because of the marked anxiety. Trancopal was then prescribed in a dosage of 200 mg. q.i.d., in addition to bed rest.

After the second dose of 200 mg. of Trancopal, the patient became calm and rational, and was able to eat. The dosage of Trancopal was gradually reduced to 100 mg. q.i.d. on the fourth hospital day, after which the patient was discharged and was able to return to her normal occupation.

**Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.*

Turn page for complete listings of Indications and Dosage.

THE FIRST TRUE "TRANQUILAXANT"

Trancopal

potent MUSCLE RELAXANT
effective TRANQUILIZER

Indications:

Musculoskeletal[1]	**Psychogenic**[1]
Neck pain (torticollis, etc.)	Anxiety and tension states
Low back pain (lumbago, etc.)	Dysmenorrhea
Bursitis	Premenstrual tension
Rheumatoid arthritis	Asthma
Osteoarthritis	Angina pectoris
Disc syndrome	Alcoholism
Fibrositis	
Ankle sprain, tennis elbow, etc.	
Myositis	
Postoperative muscle spasm	

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours. The higher dosage is recommended for the treatment of patients in the acute stages of painful musculospastic conditions, and anxiety and tension states. Children (5 to 12 yrs.), 50 mg. three or four times daily.

Supply:

Trancopal Caplets®
100 mg. (peach colored, scored), bottles of 100.

New strength ▶

Trancopal Caplets
200 mg. (green colored, scored), bottles of 100.

"Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[2]

"The effect of this preparation in these cases [skeletal muscle spasm] was excellent and prompt . . ."[3]

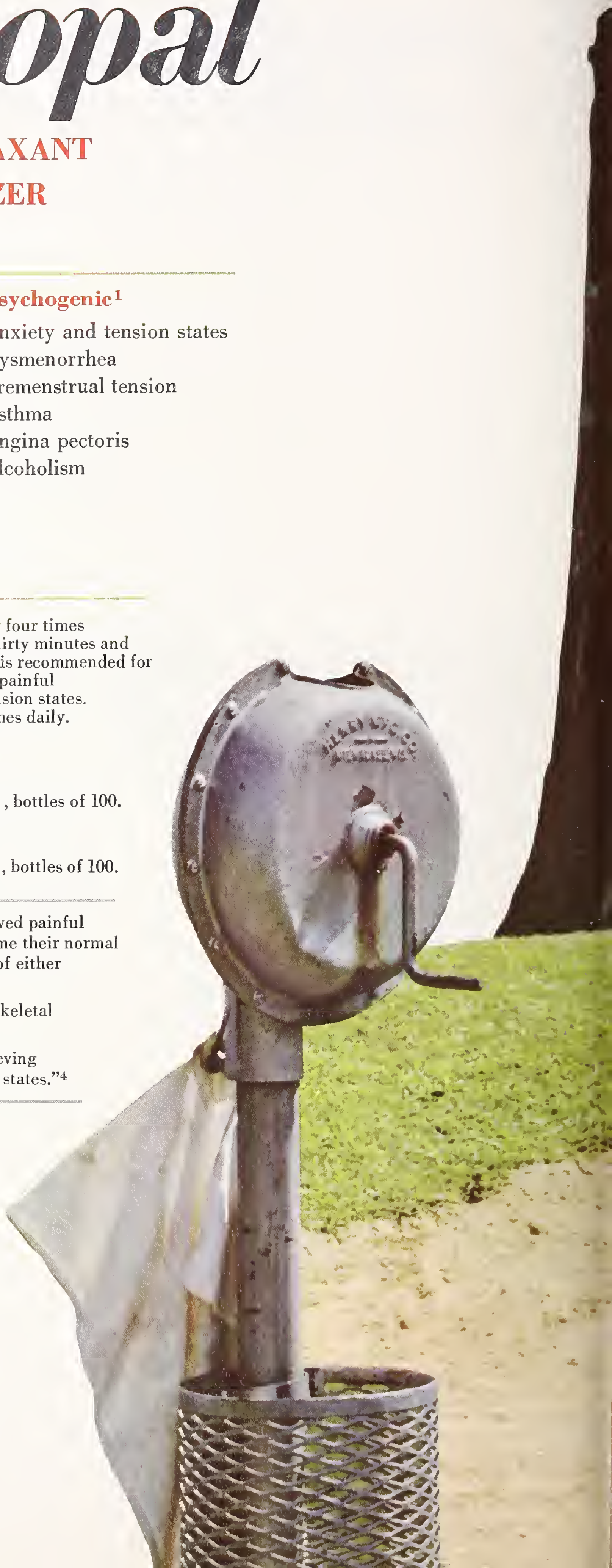
". . . Trancopal is a most valuable drug for relieving tension, apprehension and various psychogenic states."[4]

---

1. Collective Study, Department of Medical Research, Winthrop Laboratories.
2. Lichtman, A. L. (N.Y. Polyclinic M. Sch. & Hosp.): Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958.
3. Mullin, W. G., and Epifano, Leonard (Long Island College Hosp.): Am. Pract. & Digest Treat. To be published.
4. Ganz, S. E. (New York, N. Y.): J. Indiana M. A. 52:1134, July, 1959.

Winthrop LABORATORIES
New York 18, New York

Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U.S. Pat. Off. Printed in U.S.A. 9-59 (1400M)



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timed-release tablets

Controls congestion with Triaminic,[1,2,3] the leading oral nasal decongestant.

Controls aches and fever with well-tolerated APAP, non-addictive analgetic[4] and excellent antipyretic.[5]

Each TUSSAGESIC Tablet provides:

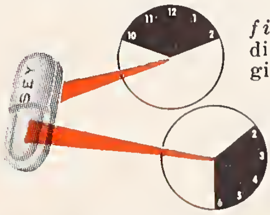
TRIAMINIC®	50 mg.
(phenylpropanolamine HCl	25 mg.
pheniramine maleate	12.5 mg.
pyrilamine maleate	12.5 mg.)
Dormethan (brand of dextromethorphan HBr)	30 mg.
Terpin hydrate	180 mg.
APAP (N-acetyl-p-aminophenol)	325 mg.

References: 1. Lhotka, F. M.: Illinois M. J. 112:259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958. 4. Bonica, J. J.: in Drugs of Choice, Mosby, St. Louis, 1958, p. 272. 5. Dascomb, H. E.: in Current Therapy, Saunders, Phila., 1958, p.78. 6. Bickerman, H. A.: in Drugs of Choice, Mosby, St. Louis, 1958, p.547.

Controls cough centrally with non-narcotic Dormethan, possessing "amply demonstrated" antitussive activity,[6] as effective as codeine.

Liquefies tenacious mucus with terpin hydrate, classic expectorant.

Prompt and prolonged relief because of this special "timed release" design:



first — the outer layer dissolves within minutes to give 3 to 4 hours of relief

then — the inner core releases its ingredients to sustain relief for 3 to 4 more hours

Dosage: One tablet in the morning, midafternoon and at bedtime. Pediatric dosage chart for Tussagesic Suspension available on request.

TUSSAGESIC SUSPENSION provides palatability and convenience which make it especially attractive to children and other patients who prefer liquid medication.

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More than 13,000,000 prescriptions attest that Veratrite continues to be the antihypertensive of choice for the older hypertensive patient. Veratrite can be prescribed safely and routinely for those who usually cannot tolerate more potent drugs.

Veratrite now contains cryptenamine which acts centrally to produce a gradual fall in blood pressure, yet improves circulation to vital organs, relieves dizziness and headache, and imparts a distinct sense of well-being. Furthermore, Veratrite achieves its effects with unusual safety and without annoying side effects.

Each Veratrite tabule contains: Cryptenamine (tannates), 40 C.S.R.* Units; Sodium nitrite, 1 gr.; Phenobarbital, 1/4 gr. Dosage: 1–2 tabules t.i.d., preferably 2 hours after meals.

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More effective than salicylate alone
in antirheumatic therapy

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"superior to aspirin" — "... evidence seems to indicate that the concurrent administration of para-aminobenzoic and salicylic acid [as in Pabalate] produces a more uniformly sustained level for prolonged analgesia and, therefore, is superior to aspirin in the treatment of chronic rheumatic disorders."[1]

In each enteric-coated PABALATE tablet:

Sodium salicylate (5 gr.)	0.3 Gm.
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Ascorbic acid	50.0 mg.

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In each enteric-coated PABALATE-HC tabl

Hydrocortisone	2.5 m
Potassium salicylate (5 gr.)	0.3 G
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Ascorbic acid	50.0 m

For the patient
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Same formula as Pabalate, with sodium
salts replaced by potassium salts

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1. Ford, R. A., and Blanchard, K
Journal-Lancet 78:185, 195

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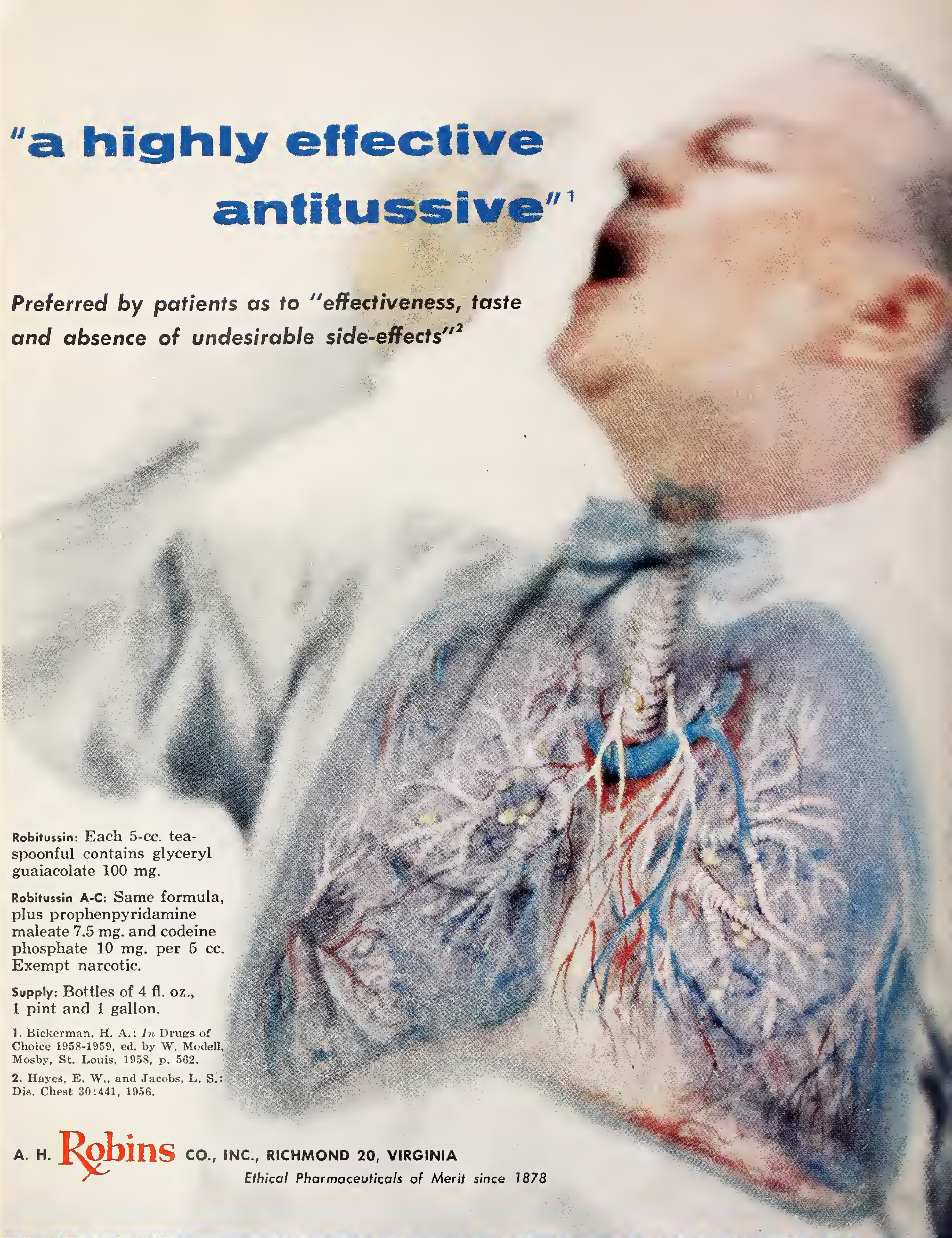

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1. Bickerman, H. A.: *In* Drugs of Choice 1958-1959, ed. by W. Modell, Mosby, St. Louis, 1958, p. 562.
2. Hayes, E. W., and Jacobs, L. S.: Dis. Chest 30:441, 1956.

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REHABILITATES THE CONSTIPATED PATIENT— HELPS RESTORE NORMAL BOWEL TONE, RHYTHM, AND SENSITIVITY.

SUPPLIED: **TABLETS:** Small and easy to swallow, in bottles of 100.
GRANULES: Cocoa-flavored, in 8 and 4 ounce canisters.

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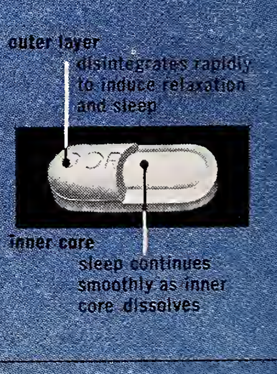
For those patients who complain

carries your patients through the middle of the night


outer layer
disintegrates rapidly to induce relaxation and sleep
inner core
sleep continues smoothly as inner core dissolves

Each Nebralin timed-release tablet contains:

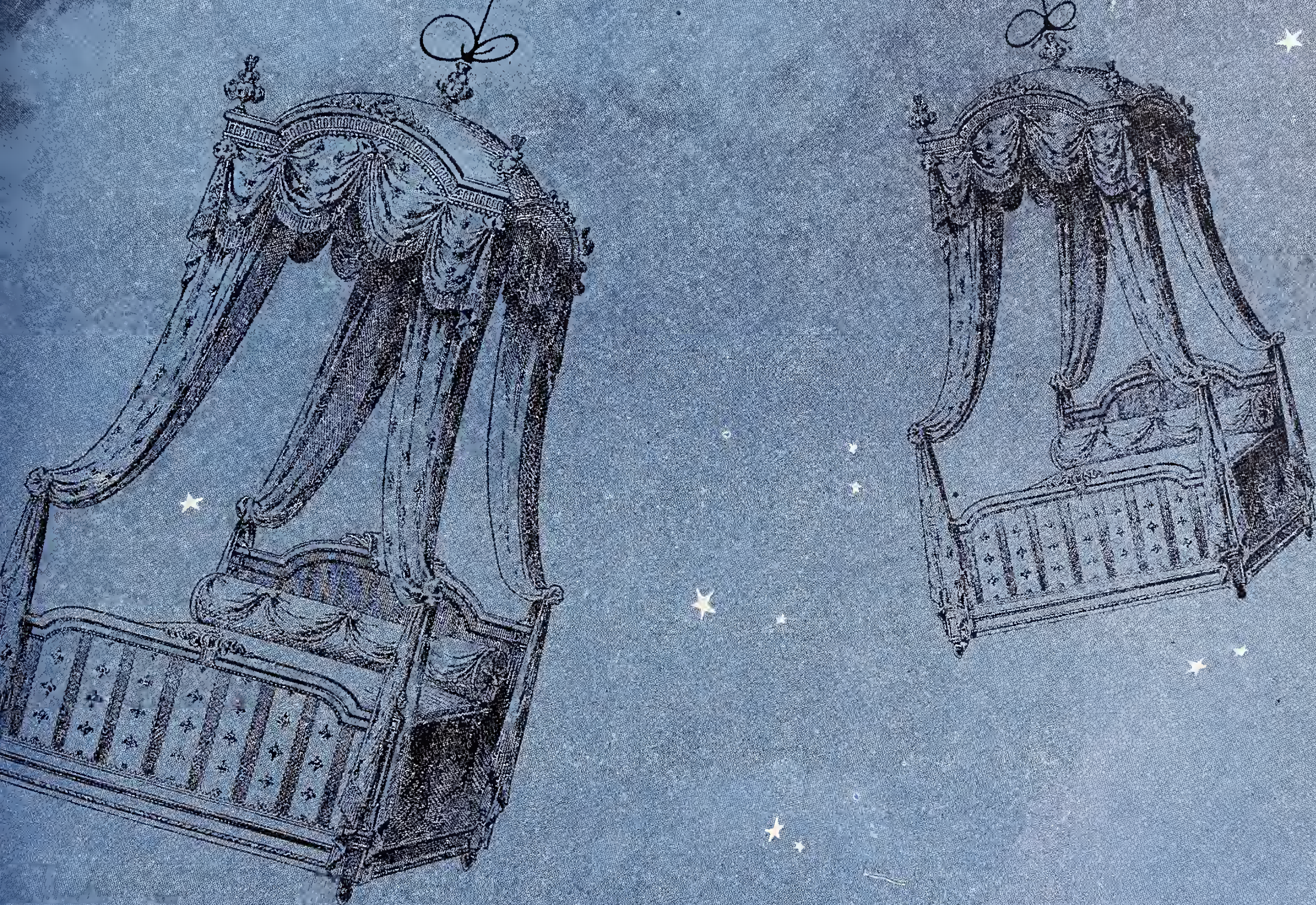
Dorsital*	90 mg.
Warning: May be habit forming	
Mephenesin	425 mg.

*Dorsey brand of pentobarbital

CAUTION: Federal law prohibits dispensing without prescription

Dosage: One or two tablets ½ hour before retiring.

about waking up at 2 A.M.



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1 Schlesinger, E. B.: Tr. New York Acad. Sc. 2:6, (Nov.) 1948.
2 Richards, R. K., and Taylor, J. D.: Anesthesiology 17:414, 1956.
3 Shideman, F. E.: Postgrad. Med. 24:207, 1958.
4 Berger, F.: Pharmacol. Rev. 1:243, 1949.

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...providing the desired gradation of potencies for relief of varying intensities of pain

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simple headache
rheumatic conditions
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of all degrees of
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the disease of many masks

Doctor, do you recognize this patient? She complains of flatulence, constipation with alternating periods of diarrhea, and colicky pains in the lower right quadrant. At other times she is troubled by anorexia, lassitude, dull headache, muscle pains and backache. Or she may have only one or two of these symptoms.

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Glarubin is administered orally in tablet form and does not require strict medical supervision or hospitalization. Extensive clinical trials prove it highly effective in intestinal amebiasis, and virtually free of toxicity.

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specific for intestinal amebiasis

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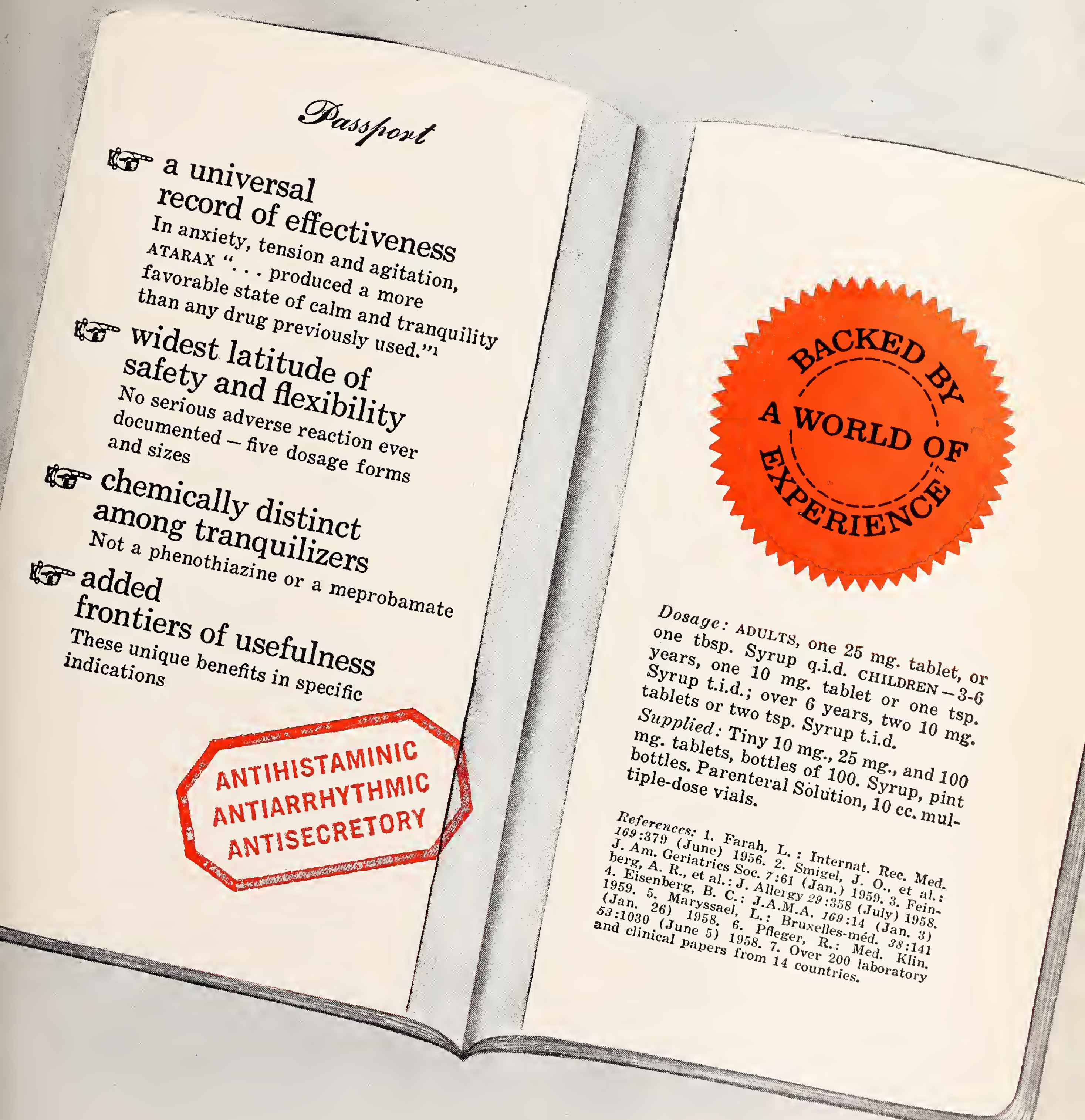

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In anxiety, tension and agitation, ATARAX "... produced a more favorable state of calm and tranquility than any drug previously used."[1]

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Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Farah, L.: Internat. Rec. Med. *169*:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. *7*:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. *169*:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. *38*:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. *53*:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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During the past year, Kent sales increased by 20-billion cigarettes—the greatest gain in popularity ever recorded by any filter cigarette in any year.

Undoubtedly much of the credit for this important rise in sales must go to Kent's exclusive "MICRONITE" Filter. This extraordinary new filter was constructed to take into account new principles of filtration which were dictated by the basic discoveries of a major research foundation, working under Lorillard sponsorship.

The foundation determined that the average puff of cigarette smoke contained over 12 billion semi-solid particles. Additional research revealed that inhaled smoke from ordinary cigarettes has a predominant proportion of particles, from 0.1 to 1 micron in diameter, average 0.6 micron.

Ordinary filter fibers are so large that they create spaces through which the small semi-solid smoke particle can easily pass. However, in the exclusive Kent filter, the fibers are mechanically manipulated in such a manner as to create extremely tortuous passageways for the smoke. In this maze-like network of superfine fibers the smoke particle has much less chance to slip through the filter.

Thus, Lorillard research created a filter which reduced tars and nicotine in the "inhaled" smoke to the lowest level among the largest selling brands. As smokers learned about the "MICRONITE" Filter, they changed to Kent. During the past year, for instance, more smokers changed to Kent than to any other cigarette in America.

If you would like for your own use the booklet, "The Story of Kent," write to:
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Lederle introduces a masterpiece of antibiotic design
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Strikingly enhances the traditional advantage of broad-spectrum antibiotics...

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Far greater antibiotic activity with far less antibiotic

Milligram for Milligram, DECLOMYCIN exhibits 2 to 4 times the clinical potency (inhibitory action) of tetracycline against susceptible organisms. Thus, DECLOMYCIN has the advantage of providing significantly higher serum *activity* levels with significantly reduced drug intake.* [1,3,5]

Actually, DECLOMYCIN demonstrates the highest ratio of prolonged activity level to daily milligram intake of any known broad-spectrum antibiotic. Reduction of milligram intake of drug reduces hazards of related physical effect on intestinal mucosa or interaction with gastrointestinal contents.

*Activity level is a far more meaningful basis of comparison than quantitative blood levels, as Hirsch and Finland note. Action upon pathogens is the ultimate value.[1]

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Unrelenting
peak antimicrobial attack
throughout therapy

The high level of DECLOMYCIN activity is uniquely sustained. It is not just an initial phenomenon but is constant — maintained on each day of treatment and between doses — without noticeable diminution of intensity. Peak-and-valley control is eliminated, favoring continuous suppression of pathogens and consequent improvement.

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Demethylchlortetracycline Lederle

“Extra-day” activity for security against relapse

DECLOMYCIN maintains significant antibacterial activity for one to two days after discontinuance of dosage[1]—a major distinction from other antibiotics. Previous drugs have declined abruptly in activity following withdrawal.

DECLOMYCIN thus gives the patient an unusual degree of protection against resurgence of the primary infection, and against secondary infection . . . sequelae not infrequently encountered and often resembling a “resistance problem.” Consequently, reinstitution of therapy or a change in therapy should rarely be necessary.

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A major contribution of Lederle research

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immediately available as:

DECLOMYCIN Capsules, 150 mg.
Adult dosage: 1 capsule four times daily.

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150 mg.
Disp # XVI
Sig 1 cap q.i.d.

1. Hirsch, H. A., and Finland, M.: Antibacterial Activity Of Serum Of Normal Subjects After Oral Doses of Demethylchlortetracycline, Chlortetracycline and Oxytetracycline. *New England J. Med.* 260:1099 (May 28) 1959. 2. Hirsch, H. A., Kunin, C. M., and Finland, M.: Demethylchlortetracycline – A New And More Stable Tetracycline Antibiotic That Yields Greater and More Sustained Antibacterial Activity. To be published. 3. Lichter, E. A., and Sobel, S.: The Distribution Of Oral Demethylchlortetracycline In Healthy Volunteers And In Patients Under Treatment For Various Infections. To be published. 4. Kunin, C. M., Dornbush, A. C. and Finland, M.: Distribution And Excretion Of Four Tetracycline Analogues In Normal Young Men. To be published. 5. Kunin, C. M., and Finland, M.: Demethylchlortetracycline: New Tetracycline Antibiotic That Yields Greater and More Sustained Antibacterial Capacity. *New England J. Med.* 259:999 (Nov. 28) 1958. 6. Sweeney, W. M.; Hardy, S. M.; Dornbush, A. C., and Ruegsegger, J. M.: Demethylchlortetracycline: A Clinical Comparison of A New Antibiotic with Chlortetracycline and Tetracycline. *Antibiotics & Chemotherapy* 9:13 (Jan.) 1959.

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...and one to grow on

A tiny tablet of REDISOL to stimulate the appetite — to help in the intake of food for growth.

REDISOL is crystalline vitamin B_{12}, an essential vitamin for growth and the fundamental metabolic processes.

Ideal for the growing child, the REDISOL tablet dissolves instantly on contact in the mouth, on food or in liquids.

Packaged in bottles hermetically sealed to keep the moisture out and to retain vitamin potency in 25 and 50 mcg. strengths, bottles of 36 and 100 — in 100 mcg. strength, bottles of 36, and in 250 mcg. strength, vials of 12.

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new hope for fetal salvage
DELA

The results of administering Delalutin before the 12th week of gestation to 82 women with habitual abortion were reported recently by Reifenstein[1] in a compilation of data supplied by 45 investigators. Every patient had experienced at least three consecutive abortions immediately preceding the treated pregnancy. More than 68% of these women were delivered successfully and uneventfully following Delalutin therapy.

Boschann,[2] in a study of pregnancies with threatened abortion, found that:

- 37% of 73 pregnancies were carried to term without progestational therapy
- 64% of 42 pregnancies were salvaged by progesterone
- 83% of 73 pregnancies were salvaged by Delalutin

Eichner,[3] found that in Delalutin-treated women, fetal salvage of infants below term weight (1000 to 2000 gm.) was significantly improved. 108 (76%) of 142 babies of this birth weight survived without mothers receiving progestational therapy, while 16 (100%) of 16 babies of this birth weight survived with mothers receiving Delalutin therapy. A comparison study was made of a group of repeated aborters treated with Delalutin, and a group with a similar history treated with bed rest and sedation.[4] Pregnancy salvage with Delalutin was twice that of the control group. Delalutin was found to be "highly active", well-tolerated and long-acting.

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Denver, Colo.

Richard Miller
Denver, Colo.

Scott Knudsen
Norwich, Vt.

References: 1. Reifenstein, E. C. Jr.: *Annals N. Y. Acad. Sc.* 71:762 (July 30) 1958. 2. Boschann, H-W.: *ibid.*, p. 727. 3. Eichner, E.: *ibid.*, p. 787. 4. Hodgkinson, C. P.; Igna, E. J., and Bukeavich, A. P.: *Am. J. Obst. & Gynec.* 76:279, 1958. 5. Tyler, E. T., and Olson, H. J.: *J.A.M.A.* 169:1843, 1959.

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References: 1. Spies, T. D., et al.: J.A.M.A. 159:645 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955 3. Gelli, G., and Della Santa, I.: Minerva Pediat 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

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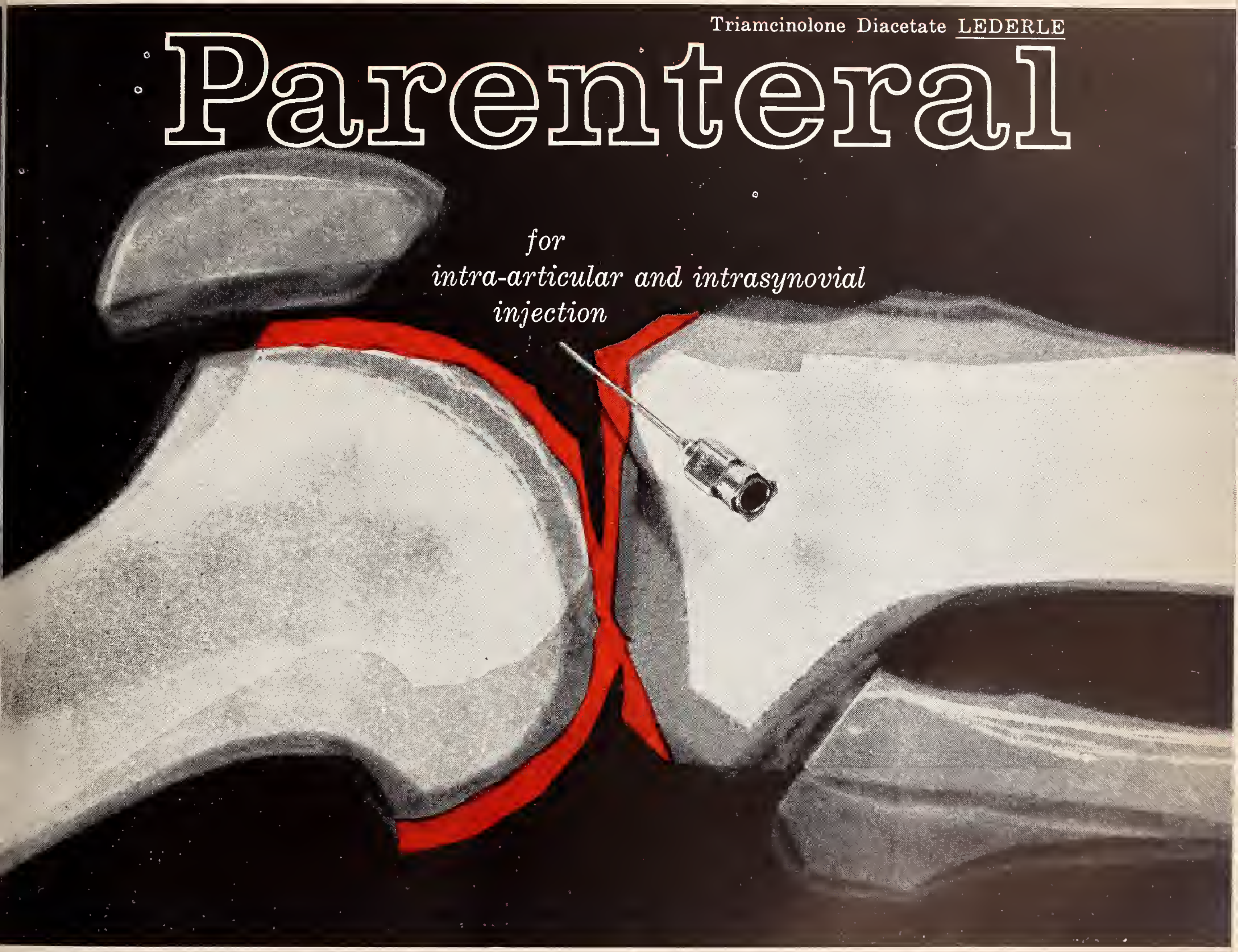

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Chief among the drawbacks to aspirin usage is gastric intolerance. This ranges from mild upset and "heartburn" to severe hemorrhagic gastritis.[1-10] Studies performed in conjunction with gastrectomy[4, 5] and gastroscopy[2] have shown insoluble aspirin particles firmly adherent to the gastric mucosa and imbedded between rugae. Reactions varying from mild hyperemia to erosive gastritis have been reported to occur in the areas immediately surrounding these adherent particles.[2, 4, 5] This is reported to be particularly true in patients with peptic ulcer.[4]

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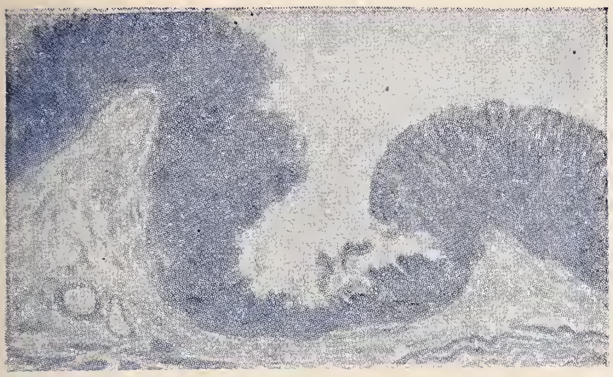
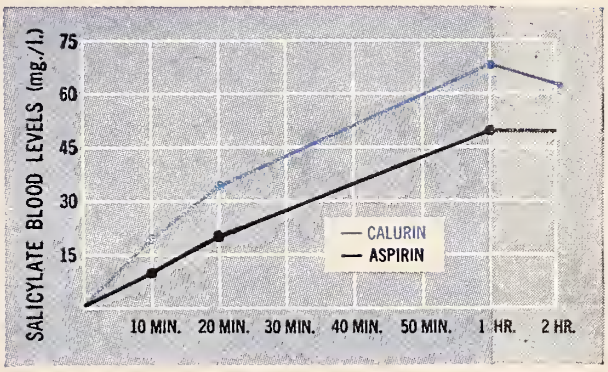


Particle-induced ulceration — section through lesion found in gastrectomy specimen. An aspirin particle was found firmly imbedded in this undermined erosion. Such lesions may be associated with the relative insolubility of aspirin, which remains in particulate form after dispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

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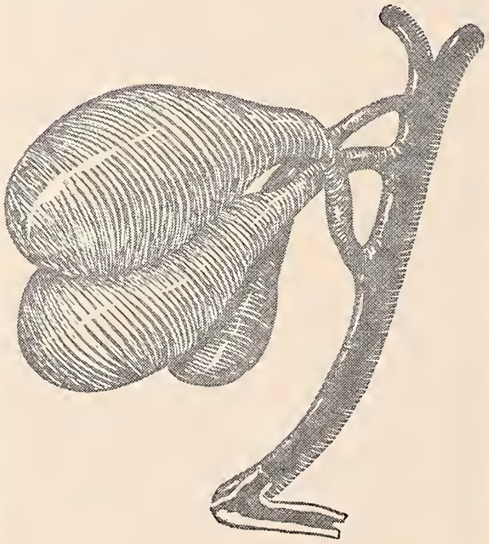
Source: Skilboe, B.: Am. J. Clin. Path. *30*:252, 1958.



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(1) Beckman, H.: Drugs: Their Nature, Action and Use, Philadelphia, W. B. Saunders Company, 1958, p. 425.
(2) Biliary Tract Diseases, M. Times *85*:1081, 1957.

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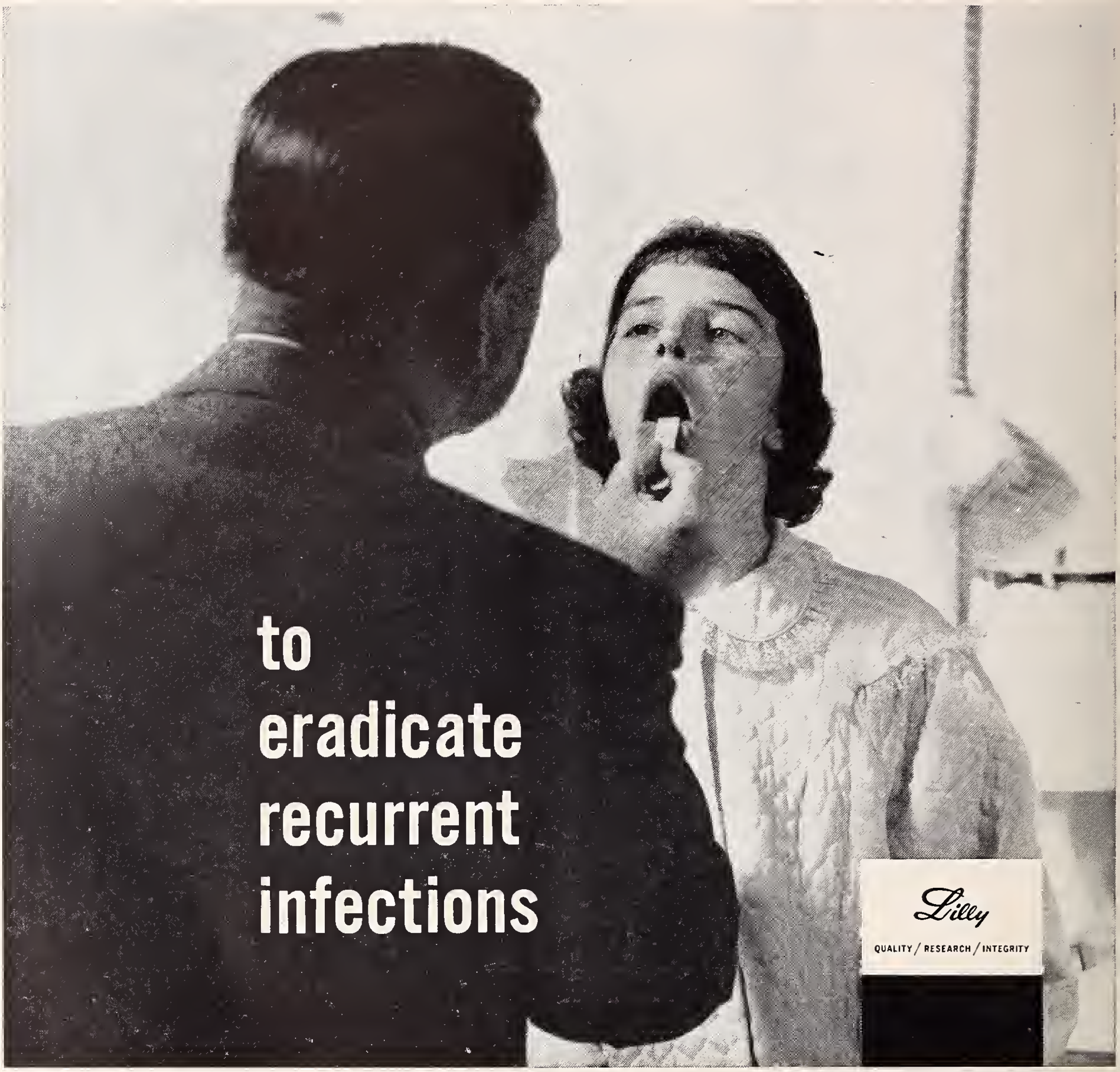

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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 10 OCTOBER, 1959

Original Articles

CANCER OF THE HEAD AND NECK*

Ian Macdonald, M.D.**

THIS "WATER FRONT" sort of title was worked out between Dr. Neubauer and me as an attempt to provide a sort of running commentary, if you will, on some of the problems that arise in relation to the management of several forms of cancer of the head and neck. Like many others, I have some strong prejudices, ideas with which there may be profound disagreement by some of my colleagues.

As to *"prophylactic" neck dissection,"* I think perhaps we should first define "prophylactic." It is dissection of the neck in the absence of any clinically suspicious nodes following control, or apparent control, of the primary lesion, whether primary treatment has been by irradiation or by surgical means. In the lip, one should regard the problem as one should in any similar situation, in terms of the greatest good for the greatest number. That means asking one's self this question: Given a carcinoma of the lip which is under control, without any suspicious nodes on clinical examination, how many of those patients will subsequently exhibit metastasis to nodes? The answer is, approximately one of every 10 patients. To do prophylactic neck dissection in carcinoma of the lip is to have done at least eight or, more likely, nine useless dissections for the benefit of one patient. To me this does not make sense. For the great majority of carcinomas of the lip, after control of the primary lesion, we advise observation only. The exceptions are those lesions which arise at or near the commissure, and they are not common. A majority of lip cancers, as you know, arise in the central three-fourths of the lower lip, but with a lesion at the commissure, it may be difficult to tell whether it originated in the upper or lower lip. Unless these lesions at the commissure are small and comparatively low-grade, they represent an exception where prophylactic neck dissection is justifiable. To define it more accurately: Given a commissural lesion over one centimeter in size and Grade 2 or more histologically (because grading is of great value in lip cancer), for that patient I advise a prophylactic neck dissection, to be done six to eight weeks after the treatment of the primary lesion has been completed.

The definition of lymphnodal pathology is of some importance, as there are a not-inconsiderable number of people who have enlarged cervical nodes, up to one and even one and a half centimeters in diameter, frequently representing residual changes from prior inflammatory episodes. The presence of a single node of that size is not necessarily significant. If its consistency is firm, it may be aspirated and smears studied, but this is of value only if cancer cells are identified.

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*Presented before the Sixth Annual Cancer Seminar, Tucson, Ariz., 1958. Arizona Division, American Cancer Society.

**From the Department of Surgery, School of Medicine, University of Southern California.

Example

To illustrate one of these problems, I offer the example of Mr. D.S., first seen with a primary carcinoma of the lip occupying the commissure. It was treated successfully by irradiation; it was a Grade 3 lesion, and this man had in his submandibular area one or two nodes that were less than 2 cm. in diameter, rather soft in consistency. We did a block dissection of the anterolateral triangle of the sort that I was happy to hear Dr. Brown describe. The pathological specimen showed three suprahyoid nodes that were involved by metastasis. This procedure was done in 1944, and this cantankerous old man is still alive and as mean as ever. So the commissural lesion, I believe, represents an exception to the customary treatment for carcinoma of the lip.

In the tongue, it's a much more difficult problem. I gathered from Dr. Brown's remarks that he believes in routine prophylactic neck dissections in lingual carcinoma, following control of the primary lesion. Hayes Martin, on the contrary, has flatly vetoed prophylactic neck dissection for carcinoma of the tongue. As a voter not registered to either party, I like to pursue a midzone of action, or inaction. I prefer to regard prophylactic neck dissection as a matter of individual decision in individual patients. It is not possible to cover all of the possible situations, but I'll offer two examples. Consider a man who has a low-grade, extrovertive, papillary lesion on the tip of the tongue, a centimeter or so in diameter, which has been surgically excised with good margins, and histologically is Grade 1+; I am content to watch that patient, and not do a neck dissection. The individual who has, on the other hand, a lesion of a lateral border of the tongue of any size, even a relatively small lesion, Grade 2+ and including Grade 4 lesions, after control of the primary, deserves a prophylactic neck dissection because of the tendency for such lesions to exhibit homolateral metastasis in the first two years after treatment of the primary proces. The individual who is old, or diabetic, or senile, or generally on the way down the degenerative physical hill, I would sooner not subject to a standard neck dissection. In short, I think that each patient poses a separate problem, and one cannot lay down any definite rules. During the past three years, I have been more inclined toward so-called prophylactic neck dissections for lingual cancer than in the preceding five or six years. In five or six out of each 10 surgical specimens, the products of such neck dissections, the pathologist discovers one or more nodes involved when there has been no clinical suspicion thereof.

"Commando" Operation

As to carcinoma of the lower gingiva, floor of the mouth, and of the buccal mucosa extending downward into the sulcus to become attached to the bone, these are situations where I think that a combined procedure should be done. This means standard block dissection of the neck, beginning at the clavicle and proceeding upward to remove the primary lesion in continuity. That is the so-called "commando" operation. I doubt that this combined operation is justifiable for carcinoma of the tongue unless the floor of the mouth is infiltrated by tumor, nor do I consider the so-called "pull-through" a desirable procedure. In lesions adjacent, attached to, or actually involving the mandible, whether primary in the floor of mouth or buccal mucosa, I think that the commando operation is preferable, for it does save lives and produce cures in the real sense of the word; any other approach is inadequate by comparison. Now, just for confusion, consider an example of a situation where we did not do a commando type of operation(Mr. T. W. R.). A carcinoma of the floor of the mouth or gingival mucosa, we never could tell which, had produced very extensive bone involvement, but the patient was 78 years of age when we first saw him in 1947. He was a tall, cadaverous, dolichomorphic character who had had auricular fibrillation for some years, but he was active and well compensated. We biopsied the extensive tumor in the floor of the mouth; it was an extremely low-grade squamous carcinoma. There were many areas in which differentiation was so complete that even under high power the overgrowth might pass as a typical hyperplasia rather than actual carcinoma. However, there was no doubt as to its malignant nature. There was no lymphadenopathy in his neck. We did a complete removal of the mandible, removal of the floor of the mouth, and an immediate reconstruction. A "pseudo" chin was produced by putting in a number of narrow long strips of gelfoam; with considerable fibrotic reaction ensuing, he has a feeble representation of the chin even now, 11 years later. He has reached the ripe age of 89, he still comes in to see us every six months, is still on digitalis and still fibrillating, but has had no recurrences. This is one example of individualization in reaching decisions.

Bad Actors

On prophylactic neck dissections, I would like to reinforce what Dr. Brown said concerning lateral facial lesions of the histologic nature of squamous carcinoma. They are bad actors, particularly those that occur on the auricular and preauricular skin and in the adjacent temporal skin. They have a strong predilection to early metastasis to the cervical nodes. If the patient is reasonably young and in good condition, this is also a situation where we prefer an operation in continuity, unless the primary lesion is quite small. Some of you may question, knowing my convictions about prognosis being biologically predetermined in most types of cancer, why I am talking about "small" lesions. These are cancers in which the biology of the neoplasm is such that it does behave according to the traditional pattern, implying the importance of diagnosis and treatment at a time when the primary lesion is still limited. There are exceptions, of course, but in general, oral cancers behave in a fashion indicating that time and degree of space occupation (or size) is of determinative importance in prognosis. (This does not apply to primary sites posterior to the circumvallate papillae, i.e., base of tongue, tonsil, pharynx.)

The next phase of this water-front coverage is the question of "prophylactic" irradiation, and I will dispose of that, if you please, by stating flatly that there is no such thing as "prophylactic" irradiation of the neck. Given a patient in whom there is no clinical suspicion of nodes, much less anything proved, to irradiate the entire side of the neck from mastoid to clavicle and deliver a canceridal "prophylactic" dose would produce sequelae of major and possibly disastrous importance to the patient. I assure you that it is intellectual titillation to think that it is practicable — even with cobalt barbecues!

Next is the choice between operative treatment and irradiation. In cancer of the lip, my own preference and practice is simply stated: The small tumors of the lip are ideal for treatment by X-ray therapy; the large lesions require surgical treatment. This means that those that are attractive for the surgeon are ideal for irradiation. From the patient's standpoint, radiotherapy produces ideal cosmetic results. If one observes the necessary rules of adequate dosage, with the proper quality of irradiation, suitably one can achieve in cancer of the lip, in our experience, over 90 per cent five-year controls. This cure rate is confined to lesions less than 2 or 2.5 cm. in diameter, which have not extended more than halfway to the gingival-buccal sulcus, and are without clincial evidence of nodal metastasis. I am not concerned with the grade of the lesion histologically, whether it's reported 1 or 4; these small and favorable lesions are ideal for irradiation.

Irradiation vs. Surgery

When carcinoma of the lip exceeds the criteria of anatomical extent just described, irradiation becomes a more formidable affair for various reasons, and surgical resection with immediate reconstruction is preferred for these larger tumors if there are no medical contraindications. If the lesion is attached to periosteum, or even adjacent to bone, segmental resection of the mandible (or maxilla) is necessary to obtain an adequate margin. If there is no significant lymphadenopathy, no neck dissection is done, although it may be necessary to remove one or more enlarged nodes to differentiate microscopically between inflammatory reaction and metastasis. Should lymphnodal metastasis become apparent later, a majority of such patients achieve permanent control of their disease with a delayed neck dissection — unlike the same situation in lingual carcinoma.

Many carcinomas of the upper lip are actually of cutaneous origin near the vermillion border, with early mucosal involvement. This provides an excuse for expressing my preference for irradiation for almost all basal and squamous carcinomas of the skin. As in the smaller lesions of the lip, surgical removal is equally effective, and I have no possible argument with those who employ regularly *adequate* excisional procedures. I just happen to be a surgeon gone wrong, who also does radiation therapy. We treat skin cancer with 3,000 roentgens (in air), half-value layer of 0.8 mm. of copper, and fractionate that dose into six equal treatments over a period of three weeks. In basal and squamous cell lesions of the eyelids, for example, in almost 200 patients, our 5-year rate of control without recurrence is 96.5 per cent. Such treatment is followed by slight atrophy of the skin, and usually a transient decoloration, and rarely any more notable changes.

Unfortunately, the plastic surgeons have an unhappy experience in that their main exposure to end results of radiotherapy is in patients who have "gone wrong"; they usually have gone wrong because they had such poor treatment in the first place. I am happy to notice that Dr. Brown is without the anti-irradiation prejudice exhibited by many plastic surgeons, although I can't blame them for such bias.

Role For Irradiation

I would not want you to think, returning now to the lip, that the "giant economy" size carcinoma cannot be treated by irradiation. Mr. P.R., for illustration, had involvement of three-fourths of his lower lip. Ordinarily, he would have had a resection of practically the entire lower lip, with an immediate closure by sliding cheek flaps. This patient, however, had complications — not only diabetes, which would not have been any contraindication, but also of rather severe myocardial damage. We were obliged to treat him with radiation therapy, and the result was fairly satisfactory, although with a little more deformity than the average operation produces. He has obvious atrophy of the skin, a little erythema developing in areas, but he is still well some six years after treatment. At least this indicates that, even in the larger lesions which we prefer to treat surgically, one can still control permanently cancer of the lip in many patients with properly given irradiation. Because of the size of the lesion, this man had a different technic of treatment, with x-radiation of half-value layer of 1.6 mm. of copper, or a more penetrating and harder beam of irradiation, and with greater fractionation. Of course, the underlying teeth and bone are always protected by lead, which is inserted under the lip, and very accurate delimitation of the portal of irradiation is assured.

Irradiation does have to go well wide of the apparent border of a primary lesion; just as one aims at a wide removal by surgical excisions, irradiation has to be wide, or at least one centimeter of margin in every direction. This is another way of saying that successful radiation therapy requires the same kind of thinking that a surgeon should use when he essays to do extirpative treatment of a malignant neoplasm.

Consider now Mr. E.R., a client of the Los Angeles County Hospital, who had a long-neglected lesion primary in the lower lip, too extensive to permit primary repair of any sort. After consultation with the plastic surgery service, we elected to do a primary excision, allow it to heal, and then let the plastic surgeons have him later. This brings up a fundamental consideration of mine: Unless one has the privilege of working with a plastic surgeon who has the "Barrett Brown philosophy," I would suggest that the best place for him to be during the extirpation of the lesion is outside the operating room. Don't let him assist you in doing the excisional procedure if he has the conservative attitude and a worrisome obsession over cosmetic niceties in such a problem as this. He would soon be arguing with you — to leave him that little centimeter here or there. Let the man who is intent upon a curative result do the excisional procedure and, even if there is to be an immediate repair, let the conservative plastic surgeon take over after the resection is complete. I regret the expression of such a critical attitude, but it is the product of experience.

All Rules Have Exceptions

An old man (T.K.) had a primary carcinoma of the lip of moderate size treated by surgical removal, and he developed, when he was in his late 70s, a submental metastasis proved by needle biopsy. This was some eight or nine years after the resection of the lower lip and, again, because of his general physical condition, instead of treating him surgically it seemed obvious that there should be a trial with irradiation, especially as there was no other cervical lymphadenopathy discoverable. He had external irradiation through two portals, cross firing the lesion. This was followed by interstitial radium in the form of weak radium needles, by the technique of Martin (of Dallas). A year or more afterward, his node was completely regressed, and his facial hirsutism so disturbed by the radiation that he got rid of his royal beaver with notable improvement in his appearance. This, of course, simply demonstrates that to every rule there have to be exceptions, even to reversing our field with surgical treatment of the primary, smallish lesion and irradiation of cervical nodal metastasis.

To indicate the place of irradiation in carcinoma of the larynx, consider a schematic representation of a lesion suitable for laryngeal fissure, to indicate that this is also the kind of involvement that deserves a trial of irradiation. By the acid criterion, if I had in my own larynx a lesion which was either carcinoma in situ on biopsy, or of that early group which involves one cord only, even if there is some involvement of the anterior commissure, I would demand a trial of x-ray therapy. Involvement of the posterior commissure is more ominous, and is an indication for laryngectomy. By a trial I do not imply treatment in a delicate fashion. Radiation therapy is given through opposing portals as small as are adequate, accurately set up under fluoroscopy at the time of the first treatment, and accurate marking of the portal on the skin. Dosage is not in terms of a particular number of tumor roentgens, but by the old-fashioned criterion of the biological reaction described by Coutard years ago; the appearance of a membrane, or *epithelite*, in the larynx. During the latter half of treatment, daily indirect laryngoscopy is an essential requisite of this treatment, and when a membrane has developed, treatment is complete. This may occur with a so-called tumor dose of 3,000 to 3,500 roentgens in one person, or 5,000 or more in most individuals. Having given that amount of irradiation, if there is complete regression of the lesion, careful observation is essential. Our experience in the last 19 years has been limited to some 40-odd carcinomas of the larynx; we don't see many, as the otolaryngologists are (properly) in control, and prefer surgical treatment. We have a 65 per cent five-year control rate of these faw carcinomas by irradiation. This is not as good a score as with laryngectomy, but each of that 65 per cent still has a natural voice. Also, this group includes a few patients with more than the early involvement described above; when five-year results are calculated for cases with involvement of only one cord, the five-year rate is over 80 per cent. That is why, personally, I would prefer radiation therapy for an early lesion, to be followed by laryngectomy if recurrence appeared. For the more advanced lesions, as I have implied, surgical treatment is the treatment of choice, with neck dissection when indicated.

These random observations on a variety of problems in "head and neck" cancer, as illustrated by clinical anecdotes, are meant to reaffirm one consideration cardinal in all cancer therapy: The prime necessity for effective treatment is individualization.

THE POSITION OF INSURANCE IN THE DOCTOR-PATIENT RELATIONSHIP*

Albert V. Whitehall
Director of Health Insurance, Life Insurance Association of America
and
Vice Chairman, Health Insurance Council

YOUR secretary-treasurer, in his letter confirming your gracious invitation to appear before you this morning, said "We would like to hear from you constructive criticism of the internist and would like to know your opinion of what the public and the insurance companies expect of us." This is an inspiring challenge, for it recognizes that in the framework of our voluntary system of private enterprise, private medicine and private insurance must work together in public service. We must work together with good, mutual understanding. We must remember that the public is our judge.

Through the Health Insurance Council, the insurance business reaches out to its partners in public service, the providers of health care, in the search for a better understanding of our respective roles and relationships. My observations here are a part of that search. I hope you will find that I have addressed myself to some of your specific problems, although I have chosen to express myself rather generally.

The practice of medicine, as we see it in America today, is characterized by two articles of faith:

1. Freedom of choice of doctor and hospital.
2. The doctor-patient relationship that we believe to be essential to good medical care.

Freedom of choice, of course, is at the very heart of our competitive system of private enterprise. We know that a monopoly, in any field, becomes dictatorial, vulnerable to political pressures, and unresponsive to the needs of individuals. A long time ago, an old lawyer told me: "You don't bargain with monopoly; you take what you get."

Competition, on the other hand, means that you do have a choice. Competitors struggle for public favor by offering the public something better. Your product, or your service, may be the best today, but if tomorrow your competitor turns up something better, your customers or your patients have the privilege of choosing that. That keeps business on its toes; that's how we make progress in this country. The public is the beneficiary of competition. Clean, vigorous competition is one of our most effective incentives to quality and continued improvement in our services.

It's interesting to note here that freedom of choice is probably more significant in the second choice than the first. The presence of a competitor — the privilege of changing our choice at any time — is a precious freedom that we'd lose under a government system. It is a better incentive to quality than most regulation.

It seems to me that the emphasis we place on the doctor-patient relationship is a natural result of freedom of choice. I asked my wife, when I wrote this, what she thought the "doctor-patient relationship" means. "Well," she said, "you must have confidence in your doctor; if you don't, you'd better get another doctor."

I know a woman, a soldier's wife, who had three children born in military hospitals. She had pre-natal care in every instance, but she never saw the doctors who delivered her babies until the day of their birth. Her opinion of military medicine is very poor. That personal confidence, the doctor-patient relationship, is very hard to establish when the patient has no choice.

Three Areas

We know that the mental attitude of a patient is often an important factor in physical recovery. The successful doctor knows that the mental attitude of the patient is very important to his own success. The doctor's reputation, and prestige, indeed, his economic survival depend upon the confidence his patients have in him.

So the doctor takes special care to assure the confidence of the patient. Some of this, of course, is just ego-building — assuring the patient of his own personal importance as an encouragement to recovery. Much of it is precautionary — to avoid the patient exercising his sacred right of free choice — in the direction of another doctor! All of it adds up to the doctor-patient relationship — *"the feeling I have when I'm glad to place myself in good hands."*

It seems to me that the doctor's effort to establish and strengthen the doctor-patient relationship's confidence — may be in three areas:

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*Presented at the Annual Meeting of the Florida Society of Internal Medicine, Miami Beach, Fla., May 3, 1959.

First, he learns all he can about the patient's needs and problems. Second, he carefully explains the care he provides. The doctor sells the idea of good care and enlists the co-operation of the patient in his own care and recovery. Third, he carefully explains the cost. The doctor who says to me, "Don't worry now, I'll tell you later," doesn't ease my mind at all. I want to know now and be sure where I stand. Worry is closely related to uncertainty.

Now — in giving a layman's viewpoint of the doctor-patient relationship, I have led up to my first major point:

The relationship of the individual doctor and patient has a parallel at the collective level: the relationship of the medical profession to the public as a whole. Indeed, it is not unfair to say that the future of medical practice in this country depends upon what American medicine does to maintain public confidence.

You see, you in your practice, never take the attitude of your patient for granted. Your patients are always judging you. The public is judging the medical profession, too — always. Today is not more critical than yesterday. Our voluntary system puts pressure upon us all to do our best and to demonstrate that we are doing a good job.

How does the medical profession maintain and strengthen the doctor-patient relationship at the collective level? Very much as the individual doctor does:

First, medicine must learn all it can about the public's needs and desires and attitudes. You can't ignore public opinion. Second, medicine must explain the care it gives. Our magazines are telling medicine's story to a wise and keenly interested audience. The marvels of today's medical care are pretty well accepted by the public. Third, medicine must explain its costs. The medical profession must take the public into its confidence if it wishes to continue to enjoy public confidence. The mystery has gone from the therapeutic side of medical care, and public confidence is strong on that point. But the mystery remains on medical costs and most of the criticism we hear of medicine today is on the economic side.

So this is my second main point: *The doctor-patient relationship at the collective level, between the medical profession and the public as a whole can be strengthened by a better public understanding of medical costs and standards of charging.*

And, now I can get to the title of this talk — the position of insurance in the doctor-patient relationship. I will state it this way as my third major point:

Payment of the doctor for his services is an essential part of the doctor-patient relationship. The medical profession must make its contract directly with the public; it should not try to bargain with insurance on fee levels.

I have observed that some specialty groups such as your own, have sought to have insurance companies change their policies so as to give that specialty its deserved recognition. There is a feeling, partially true, that you could make a contract with us that would be influential, at least with the patient. There are reasons why you should not do this, and why we cannot bargain with you.

Third Party

In any contract between medicine and insurance, medicine would place itself, to that degree, under control of a third party. Do you really want this? Aren't you better off to take the longer range, though more difficult approach of selling your cause to the public? I assure you, the insurance business is keenly sensitive to consumer demand. We have many varieties of coverages and our agents are eager to sell every bit of protection your patients will buy. You tell them what to expect in the way of professional fee levels and insurance can tailor its contracts to the joint needs of doctor and patient.

Admittedly, patients and doctors sometimes look to the insurance fee schedule as a guide to a proper professional fee should be. The insurance business deplores this. Not all insurance schedules are intended to be adequate; we do not presume to set your fees. This is your prerogative. But, you must exercise it in such a way that the public clearly understands you and gains confidence in you.

Even if it were to medicine's advantage to bargain its fee levels with insurance — and I have just said it is not — there are reasons why insurance cannot bargain on this point.

You see, in the first place, the insurance business is simply the custodian of the public's money. We have no right to give it away or even to bargain it away. We are not a part of your bargain with the public. It is our function to underwrite that bargain and to make it possible. The money we pay in health insurance benefits is that of our policy-holders, entrusted to us for certain, definite, and limited purposes.

A second factor is that it should not be the function of the insurance mechanism to control the economies of medicine. But we point out to you that the public will not permit costs to be uncontrolled. It is part of medicine's bargain with the public that it exercises a prudent control over costs; and it is essential to the maintenance of public confidence that such control be demonstrated in a satisfactory manner.

It is probable that insurance has intensified this problem of self-control. Insurance helps the patient pay his doctor bill. This has meant fewer bad debts for doctors, fewer charity cases. But this fine state of affairs can also be a trap. For the patient who would have resisted paying your fee from his own pocket is now eager to see your bill paid — by his insurance. Individually, the patient will seek to induce you, perhaps unconsciously, to do things that will increase the cost of medical or hospital care. Collectively, these are the same citizens who will turn upon you, and scream that all doctors are opportunistic, undisciplined and greedy — and that they have a ease to prove it!

The fact is that doctors have done much more about controlling the economics of health care than the public realizes, and more than even doctors sometimes realize. The insurance business believes that the control of medical costs must be undertaken by the medical profession itself, and explained to the public as part of the collective doctor-patient relationship I have referred to. We all agree that self-control is the best control.

I must make it clear that I am not referring to controls through grievance committees. A grievance committee can only reach the infrequent gross overcharges, and although one flagrant case can multiply a thousand times in the gossip that goes around, these are not the real causes of inflation in medical costs.

For Effective Control

The really effective control that I have been thinking of here is for the medical profession to take the public into its confidence in establishing fairly exact standards of professional charges and fees. I submit to you that this is also one of the most effective measures for maintaining and strengthening public confidence in the medical profession. And I repeat — doctors must not look to the insurance business to establish those standards; this is the doctor's job and a part of the collective doctor-patient relationship. Insurance should not come between the profession and the public.

As a matter of fact, the insurance business is somewhat nervous over even discussing the idea that doctors should permit their standards of charging to be a matter of public knowledge. We're afraid you doctors will think the insurance companies are trying to force the profession into a rigid pattern for our own selfish interests. We do have this selfish interest; if you doctors lose your freedom, we lose our accident and health business; and the public loses a system that has the most effective incentives to quality and good service.

The idea of permitting the public to know how professional fees are determined is not as strange to doctors as it is to insurance companies.

Five years ago, the medical society in San Joaquin County, California, adopted the idea of a fee schedule based on the average income of the community rather than the income of each patient. The doctors there are so pleased that this year several other counties have set up similar foundations in which the community-wide fee level is one of the basic concepts.

Even in the Bronx, in New York City, Medical Economics reports, doctors have found it desirable to hang a plaque in their waiting rooms announcing the price of office visits and home calls.

I'm sure you can think of many other instances where doctors have avoided the public uncertainty over fees by a frank disclosure. This is not a new concept; although there are differences of opinion as to its desirability.

Is the idea of an orderly approach to professional fees such a shocking idea? Not to the courts of law, where the concept of a "reasonable and customary fee" is often used. Not to the California Medical Association which pioneered, several years ago in a scientific study of the relative values of the more common procedures. Nor to the American Medical Association, whose house of delegates, last December, recommended that state medical associations conduct similar studies in their own areas, using the California format for uniformity.

Most doctors, I am certain, try to have their charges bear a reasonable relationship to the accepted standards of the community. I saw this demonstrated in a county medical society meeting in a semi-rural community. A local employer had just bought a major medical expense insurance program for his employes. He pleaded with the doctors not to increase their fees simply because of the existence of insurance and the absence of a fee schedule. One old doctor burst forth: "We all know what the going rates are in this area. What's all the shooting about?"

Mixed Blessing

This illustrates my fourth and final major point, I think. The fact is that while the doctors all knew the going rates in the community, the public didn't. And so — quite naturally — the public was suspicious. It is my opinion that until doctors establish reasonably clear levels of charges so that the public may understand, every doctor and every fee will be subject to the suspicion that inevitably accompanies uncertainty.

So my fourth and final point is that health insurance, like most good things, is a mixed blessing. It has lowered the financial barrier between doctor and patient, and thus brought more doctors and more patients together. *But there is grave danger that an over-dependence upon health insurance may squeeze out an essential element of the doctor-patient relationship: the awareness that, even with health insurance, it is the patient who pays the doctor.*

If the patient or the doctor, or both of them, forget this fact, then insurance has interfered seriously with one of the most important elements of our voluntary system and one of the strongest incentives to quality. You — the doctor — must not let that happen. The satisfactory doctor-patient relationship is your best guarantee of continued freedom from external regulations and restrictive controls. You must take affirmative steps to be sure that the patient deals with you and that you do not let his insurance come between you. Insurance stands behind you both in the transaction — not between you. And the medical profession must maintain public confidence by making its deal with the public.

In summary, then, here are the points I have suggested for your consideration:

First, the relationship of the individual doctor and patient has a parallel at the collective level: The relationship of the medical profession to the public as a whole.

Second, the doctor-patient relationship at the collective level, between the medical profession and the public as a whole can be strengthened by a better public understanding of medical costs and standards of charging.

Third, payment of the doctor for his services is an essential part of the doctor-patient relationship. The medical profession must make its contract directly with the public; it should not try to bargain with insurance on fee levels.

Fourth, there is a grave danger that an over-dependence upon health insurance may squeeze out an essential element of the doctor-patient relationship; the awareness that even with health insurance, it is the patient who pays the doctor.

My plea is that, for the preservation of our voluntary system, American medicine give primary attention to strengthening public confidence in medical costs and standards of charging through more adequate public information. The public today has great confidence in the quality of medical care. There is equal faith in the ability of voluntary health insurance to finance it. But it would be a serious mistake to take these for granted.

Voluntary health insurance has been the principal bulwark of American medicine against the encroachment of government and monopolistic regulation. We are proud to be your allies in preserving the voluntary system of private enterprise, because we believe our way of life produces pressures upon all of us to perform more efficiently in our service to the public.

But health insurance is simply a useful tool. Like any complex instrument, it must be understood, and it must be used properly. I hope I have demonstrated to you that the proper place of health insurance is *beside* you and your patient, *beside* you and your public, and *not between* you.

MEDICINE AS A SOCIAL SCIENCE*

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IN A letter to the chemist Joseph Priestley, Benjamin Franklin once expressed the belief that a time would come when "all diseases may by sure means be prevented or cured, not excepting that of old age, and our lives lengthened at pleasure even beyond the antediluvian standard." At first sight, we appear today close to the fulfillment of Franklin's optimistic prophecy. Not so long ago, most children died during infancy or in their teens; only a small percentage survived into adulthood. For example (according to Hugh Smith in *The Family Physician)* approximately two-thirds of London's children born between 1762 and 1771 died before the age of five, fully three-quarters of them never reached the age of two. This state of affairs prevailed not only among poor people, but also among the socially fortunate as illustrated by the case of Queen Anne, with 17 pregnancies and not a single surviving child.

The situation is very different today in the Western world. Largely thorugh the control of microbial diseases and the improvements in general nutrition, the immense majority of children survive. Moreover, even those suffering from diabetes, congenital heart abnormalities, and many other formerly fatal diseases, can now have an almost normal span of life. Progress has been much less dramatic with regard to the diseases which affect adulthood. Yet it is obvious that several types of ailments and accidents which once were uniformly fatal in this age group can now be treated so effectively that they have been all but eliminated as important causes of death. As a result, more and more persons in our communities exceed the life span of three score and 10 to which so few could aspire in the past.

While the countries of Western civilization have, of course, been the chief beneficiaries of the modern advances in human health, some of the less privileged parts of the world have also shared in the fruits of medical science. Indeed the 10th anniversary of the World Health Organization was celebrated last year by many speeches affirming that the world is approaching medical Utopia. In the words of Dr. M. G. Candau, director general of WHO, "If the great advances gained in science and technology are put at the service of all people of the world, our children and their children will live in an age from which most of the diseases our grandparents and parents took for granted will be banished . . . It may no longer be Utopian to envisage a new chapter in the history of medicine."

No one can take exception to these words, but their implications are far more complex and less cheerful than appears at first sight. Within limits it is true that we can control many of the diseases that "our parents and grandparents took for granted." But this does not prove that we know how to control the disease problems that will be encountered in the future, nor even, for that matter, those of the present. It is seldom recognized that each type of society has diseases peculiar to itself, indeed that each civilization creates its own diseases. Furthermore, there is no evidence that the techniques developed for dealing with the disease problems of one generation can cope with the problems of another. The word "Utopia" is here the telltale. Whether they be medical or political, Utopias imply a static view of the world. In reality, however, societies are never static; men also change, and so do all their problems. True enough, we can expect a "new chapter in the history of medicine," but the chapter is likely to be as full of diseases as its predecessors; the diseases will only be different from those of the past.

There is no doubt, of course, .that scientific medicine is now essential to our social existence, and contributes much to the success of modern societies. The paradox is that, despite the spectacular advances made in the knowledge and treatment of disease, the need for hospital facilities and the cost of medical care continue to increase. This results in part from the fact that criteria of health have become much more exacting in modern societies, but other reasons are also apparent. While a few of the old disease problems are being solved, new ones which are constantly cropping up make modern man increasingly dependent on medicine for his very survival. The situation is not unlike that faced by the farmers and gardeners in their attempts to protect crops against weeds and pests. The task is never finished because as one problem is solved, another soon appears which requires attention. Nature always strikes back. As discovered by the Red Queen, it takes all the running we can do to remain at the same place.

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*Fourth Lecture in the 1959 Kennecott Series. Delivered March 19, 1959 at The University of Arizona.

The Good and Bad

It would be presumptuous to try to predict the disease patterns of the future. Suffice it to contrast here, for the sake of illustration, some of the problems which dominated medicine a century ago with those likely to become of increasing importance in the near future.

Whereas water pollution used to be responsible for much serious and even fatal disease among our ancestors, air pollution is today taking its place. Chemical fumes from factories and exhausts from motor cars are causing a variety of pathological disorders that bid fair to increase in frequency and gravity as time goes by, and that will handicap even more the lives of our children. There is reason to believe that various types of radiations will soon add their long range effects to this pathology of the future.

During recent decades, we have gone far toward controlling microbial spoilage of food, but we are beginning to recognize that the new synthetic products which have become part and parcel of modern life can elicit an endless variety of toxic and allergic effects.

The vitamin and other nutritional deficiencies that used to be the cause of much disease have now become rare; in their place, other forms of malnutrition are arising from the fact that the nutritional regimens formulated for physically active human beings are no longer suited to the automobile-borne and air-conditioned life in the 20th century.

In the past, the labor classes suffered from physical exhaustion; now labor saving devices and automation are beginning to generate a type of psychiatric disturbance that will greatly complicate the medicine of tomorrow; boredom is replacing fatigue.

Even more striking, perhaps, is the fact that medicine is creating new disease problems by reason of its very successes. This other side of the picture came out in the course of a debate held in London on Nov. 17, 1952, when the Hunterian Society voted 59 to 47 "that the continued advance in medicine will produce more problems than it solves." Facetious as it is, the resolution clearly reflects the awareness that all is not as well as advertised in the world of medicine.

Among the new problems arising from the partial control of man's ancient plagues, some have an economic basis and today are apparent chiefly among the underprivileged peoples of the world. In the past, microbial diseases acted as one of the checks in population size by killing large numbers of children and keeping down the number of persons who reached old age. To put it rudely, nature balanced the books for us. Today, public health measures, supplemented by the use of insecticides and anti-microbial drugs, greatly reduce the number of early deaths. As the birth rates show as yet no sign of decreasing, the world population is growing in an unprecedented manner. In Ceylon, for example, the partial control of malaria resulting from the use of DDT has resulted in a sudden increase of the population during the past years. Unfortunately, malaria control in the tropics is not an unmixed blessing because national economies are rarely capable of making orderly adjustments to the new state of affairs. It is of particular importance in this regard that food production and especially the supply of well balanced proteins cannot keep pace with the increase in world population. Advances in agricultural and industrial technology will of course improve food supplies, but not fast enough for the needs. While the world population increased by 8 per cent during the past 10 years, the food production increased by only 5 per cent, and in consequence more people go hungry today than did a decade ago. There is no doubt that food deficiencies will, in the long run, cause more physiological misery and suffering than has been prevented by the partial control of infection.

Other Consequences

Less apparent as yet, but also a threat for the future, are the economic and biological consequences of the survival of persons suffering from various types of physical and mental deficiencies. Increasing numbers of these persons cannot pull their full weight in society and require constant medical supervision and economic assistance. They constitute a social burden which is likely to grow heavier with time precisely as a result of medical advances. Even more important than these economic considerations, however, is the fact that many of those who are saved from death do transfer to their progeny the genetic basis of their deficiencies. As stated by the English geneticist, Darlington, "Those who were saved as children return to the same hospital with their children to be saved." In other words, we can anticipate the accumulation in society of individuals who will be able to function, survive and reproduce only by virtue of drugs or surgery. They will be constantly dependent on medical supervision for their welfare.

During recent decades, students of human genetics have repeatedly expressed their concern regarding the biological consequences of this situation. In a gloomy mood, Prof. H. J. Muller spoke of the time when people would have "to live carefully, to spare and to prop up their own feeblenesses, to soothe their inner disharmonies and, in general, to doctor themselves as effectively as possible. For everyone would be an invalid, with his own special familial twists." Let us hasten to say that not all geneticists take such a dark view of our biological future in the Western world. But even the most optimistic probably recognize that there is much truth in a quatrain published shortly after World War I in the London Spectator:

Science finds out ingenious ways to kill
Strong men, and keep alive the weak and ill—
That these a sickly progeny may breed,
Too poor to tax, too numerous to feed.

While these problems are becoming more apparent in modern societies, they are not entirely new. In ancient civilizations and among primitive peoples, one commonly finds social customs and taboos which represent efforts to deal with the difficulties created by the existence of individuals who are economically or biologically deficient. Among Eskimos and certain Indian tribes, aged people were expected to abandon the camp and die once they had become too much of a burden for the group. For different but related reasons, unwanted children were left to die from exposure in Sparta. In fact, similar practices which seem cruel to us have been defended by some of the most idealistic social philosophers in the past. Suicide of the sick was encouraged by the Stoics and other sects, even by Plato. At Marsielles in Roman times, poison was kept in the city for those who could present to the council a reason for wishing to rid themselves of life. More surprisingly, a similar attitude was taken in the 17th century by Thomas More (who nevertheless has been recognized as a saint by the Catholic church, and endorsed by Communist Russia). In More's Utopia, those who were incurably ill and in continual pain were urged by the priests and magistrates to kill themselves. "Yf the dysease be not onelye vncurable, but also full of contynuall payne and anguyshe, then the priestes and the magistrates exhort the man, seynge he ys not able to doo annye dwtye of lyffe, and by ouerlyuing hys owne deaths is noysome and yrkesome to other, and greuous to hymself; that he wyll determyne with hymselfe no longer to cheryshe that pestilent and peynefull dysease: and, seynge hys lyfe ys to hym but a routmente, that he wyll nott be vnwyllynge too dye."

In this respect at least, the ethics of the modern world have grown loftier since Plato and More. All decent men now regard human life as sacred, worth preserving whatever the cost to the individual or to society. Moreover, experience has taught us that some of the greatest achievements of the human race have come from individuals suffering from handicaps that rendered their physical life miserable and that would have prevented their survival in an unsheltered environment. Thus, selfish motives agree with modern ethics and religious ideals in making the preservation and prolongation of human life the ultimate goal of medicine. There is, furthermore, biological justification for this attitude. While it is certain that the physically handicapped could not long survive under "natural" conditions in the wild, it is also true that medical and other social skills make it possible for men to live long and function effectively in the modern world even though they be tuberculous, diabetic, blind, crippled, or psychopathic. The reason of course is that fitness is not an absolute characteristic, but rather must be defined in terms of the total environment in which the individual has to spend his life.

Implications Overlooked

On the other hand, it must be realized that fitness achieved through constant medical care has grave social and economic implications which are commonly overlooked. On the one hand, we can expect that the cost of medical care will continue to soar because each new discovery calls into use more specialized skills and expensive items. As of today, medical care represents some 10 per cent of the national income in the United States. There is certainly a limit to the percentage of its resources that society can devote to the maintenance of its medical establishments, and a time may come when medical ethics and policies will have to be reconsidered in the harsh light of economics. Furthermore, it must not be taken for granted that the power of science is limitless. Only during the past few decades and only in a few situations has medical treatment permitted the victims of genetic disabilities to survive and to reproduce on such a large scale. Should the trend continue, therapy may not be able to keep pace with the problems that will continue to increase in number and in variety. Yet, failure to meet them might eventually lead to biological extinction. The problem before us, therefore, is to reformulate medical policies compatible with our system of ethics, but within the limitations imposed by economic and biological consequences.

Ever since Malthus, many students of human ecology have pointed to the dangers inherent in the continuous growth of the human population, and they have emphasized the urgency of taking measures for limiting its size in the world at large. While it is obvious that medicine cannot ignore this issue, it is also essential to emphasize that the population problem should not be considered only from the point of view of numbers. The maximum desirable size of the human population will be determined by technological developments as well as by ecological factors and values which have not yet been adequately explored and which cannot be discussed here. But whatever the quantitative limits put on the maximum desirable population in the world or in any country, the qualitative characteristics of the people are at least as significant as their numbers, indeed probably more crucial for the future of the human race. It will serve no useful purpose in the long run to limit the size of the human population if adequate steps are not taken to maintain its quality — the biological, intellectual and moral stamina of its fiber. Because of the nature of my assignment I shall limit my discussion to the medical aspects of this problem, although the other aspects are at least as important.

First, it is necessary to emphasize the obvious but often forgotten truth that to prevent disease is more important than to cure disease. In certain scientific circles, as well as in the lay mind, there is a tendency to believe that the "conquest" of disease depends primarily on the development of therapeutic procedures and particularly of drugs. In reality, however, treatment of established disease is equivalent to bringing the fire company a bit too late. The blaze may be put out, but there is often a good deal of damage. Moreover, putting out the fire rarely corrects the conditions which originally caused it to occur. Needless to say, modern medicine has contributed enormously to the development of techniques for the prevention of disease and indeed some of its greatest practical successes have been in this area. But much remains to be done in the field of prevention. It must be emphasized over and over again that the ultimate control of the great plagues of our times — among others the vascular diseases, cancers, or mental disorders which are so much talked about at present — will depend more on prevention based on knowledge of their genesis than on methods for the treatment of sick people. The lay public and the organizations concerned with the distribution of research funds must become sophisticated enough to recognize the necessity of dealing with the social factors which contribute to the increased prevalence of certain disease problems in our type of society.

Role of Environment and Behavior

There is no doubt that much prevention of crippling disease can be achieved through certain types of reforms in our way of life. One needs only mention the fact that the cleaning up of our cities and the general improvement of living conditions at the end of the 19th century were the most important factors in changing the monster of infection into but a shadow of its terrifying past. Likewise, it is not unlikely that effective control of air pollution — and this goes beyond abatement of smoke and removal of soot — will contribute far more to the control of pulmonary diseases than would the discovery of any drug for the treatment of lung cancer or chronic bronchitis. Many other examples could be cited to illustrate the crying need for studies on the role played by the environment and by behavior in the causation of disease. It is rather surprising — and shocking — to see this type of research so grossly neglected in a society which has derived some of its most startling successes from the control of the environment.

Worth considering also is a re-orientation of research in the field of individual resistance to disease The most spectacular achievements of modern medicine have been in the development of procedures for the relief of symptoms, and also of techniques for dealing with specific pathological processes — for example, vaccines or antibacterial drugs for certain types of infection, hormones for endocrine disorders. In contrast, the factors which affect the general ability of the body and of the mind to meet the stresses and strains of life have been very little studied and as a result only the vaguest knowledge is available concerning this aspect of medicine. Yet, it cannot be doubted that human beings possess a wide range of adaptive power and that their potentialities in this respect can reach their full manifestation only under the proper kind of physiological training. This fact points to the need for more intensive studies of the mechanisms through which man achieves adaptive fitness to the various forces of his total environment.

From the social and religious points of view, the most difficult of the problems arising from the increasing power of medicine to affect human destiny will be the formulation of techniques to prevent the accumulation of unwanted hereditary characters in the population. At the outset it must be acknowledged that the science of human genetics is in such a primitive state that it cannot yet constitute an effective guide for action. Furthermore, even when adequate scientific knowledge in this field has become available, emotional factors will long interfere with its application to problems of human medicine. In general, as noted by G. K. Chesterton, "Men do not marry in order to have children, they marry because they are in love," but unfortunately, the fact that they are in love does not guarantee the biological quality of the children they beget. It will be long before genetic considerations have much influence on family planning. Yet, even in this most delicate area of human feelings, it is not unlikely that education, based on knowledge, can progressively and usefully modify social mores. In fact, history provides many precedents for the social acceptance of limitations in the freedom to select a mate. For example, primitive people had long ago evolved taboos against marriage between kin, and restrictive regulations to this effect exist in all societies. It can hardly be doubted that these restrictions originated from the subconscious awareness that consanguinity often has unfortunate biological consequences. During recent decades, many countries have introduced premarital tests for veneral diseases; it is probable, therefore, that tests aimed at the prevention of hereditary diseases will also find acceptance once their practical usefulness has been established and the public convinced of their value. Mankind has displayed in the past and can certainly display in the future great ability in adjusting its ethical and religious beliefs to the practical requirements of life in complex societies.

The considerations which have been presented in the preceding pages cannot yet influence the behavior of the practicing physician during the performance of his daily task in the treatment of disease. The moral responsibility of the physician in our society is to use all available resources for the succor of the sick and for the preservation of life, whatever the cost and the consequences. But the duty of the practicing physician toward his individual patient is only one aspect of medicine. Another aspect is made up of the knowledge, practices, and points of view which bear on the welfare of the community as a whole, and on the future of mankind. And this has a large bearing — even though ill-defined because never discussed — on the formulation of a social philosophy of medicine.

Dangerous Illusion

In my opinion, it is meaningless and dangerous to encourage the illusion that health is a birthright of man, and that freedom from disease can be achieved passively through the use of drugs and by other medical procedures. Like political freedom, freedom from disease should not be regarded as a commodity to be distributed by science or government, or to be obtained passively from a physician or at the corner drug store. Goethe's words apply here: "What you have inherited from your father, you must earn again, or it will not be yours." Likewise, health can be earned only by a disciplined way of life.

It must be realized also that health and disease are concepts too complex and too subtle to be defined merely in gross physical terms. The meaning of these concepts is conditioned by the demands of the social environment and even more by the goals that the individual formulates for himself. Optimum performance imposes different health requirements on the plowman, the jet pilot, and the philosopher. Thanks to medical science, we are in the fortunate situation of having today more than ever before the means and the knowledge to achieve the kind of health that we want, but this does not relieve us of responsibility. The truth is that the power at our disposal will be to no avail unless we work for the kind of health that we want, and this demands that we define our individual and social goals and that we have the courage to make choices.

It must be realized, furthermore, that the attitude of the physicians who are practicing the medicine of today, and the efforts of the scientists who are creating the medicine of tomorrow, are influenced — and to a large extent directed — by the beliefs and wishes of the culture to which they belong. If the social atmosphere puts a great premium on techniques and products designed to minimize effort, to relieve pain, and to increase the selfish enjoyment of today, these goals will be given priority by medical practitioners and research scientists. To a very large extent, this is what is happening today, in my opinion at the sacrifice of higher values. I believe that in medicine as in other social pursuits, the long range welfare of individuals and of the community often makes it advisable to forego some of the immediate comforts and pleasures for the sake of the future. Over-emphasis on the avoidance of effort and pain is an attitude fraught with dangers for the individual and even more for society; indeed, it amounts to social suicide.

Thus, medical philosophy at a high level transcends the problems posed by the care of the sick patient and must take into consideration the philosophical meaning of human existence. If we believe that the individual is but a link in a long chain of human adventure, and that the continuity of human life is our collective responsibility, then it is wrong to jeopardize the future of the group for the sake of today's comfort. Medicine is one of the highest forms of social philosophy because it must look beyond the individual patient to mankind as a whole. The more effective it becomes through scientific knowledge, the more it must concern itself with the long range consequence of its practices for future generations.

MULTICENTRIC PAPILLARY CYSTADENOMA LYMPHOMATOSUM (WARTHIN'S TUMOR) OF THE PAROTID GLAND: REPORT OF A CASE

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THE MORE common tumors associated with the parotid salivary gland have been the object of numerous investigations from both a surgical and oncological point of view. This is perhaps due to the remarkable variations which their histologic pictures may present.

Foote and Frazell(1) define papillary cystadenoma lymphomatosum (Warthin's tumor) as a benign tumor composed of a papillary epithelial component intermingled with well developed lmyphoid tissue commonly containing germinal centers. Albrecht and Arzt(2) in 1910 first separated the lesion as an oncologic entity, ascribing its histogenesis to heterotopic pharyngeal anlagen within lymph nodes located within the substance of and in juxtaposition to the parotid gland. Their published studies of this neoplasm showed conclusively that it should be regarded as a distinct histological entity, separate from other tumors arising as lateral cervical new growths such as the brancheogenic and dermoid cysts. Their contribution should have clarified the histogenesis of this interesting neoplasm. Unfortunately, this was not to be so. Subsequently observers classified the tumor under a variety of titles, apparently reflecting minor divergences in opinion regarding its origin, viz, branchiogenic papillary cystadenolymphoma(3), adenolymphoma(4), cystic papillary adenoma(5), and branchioma(6). Warthin's study(7) in 1929 managed to achieve some unanimity of terminology, the designation papillary cystadenoma lymphomatosum being generally accepted, and the eponym, Warthin's tumor, being used colloquially.

Plaut(8) analyzed 48 previously reported cases in the literature up to 1942 and added 16 previously unreported cases. He mentions only two instances of bilateral appearance of the tumor, one previously reported by Nino(9) and one reported for the first time in his own article. In 1943, Ramage *et al.*,(10) reported a case of bilateral adenolymphoma of the parotid gland; their patient had in addition *multiple* growths on the right side. In 1944, Martin and Ehrlich(11) reported on 22 additional cases of papillary cystadenoma lymphomatosum including three instances of bilateral growth and one instance of multicentric growth. Thompson and Bryant(12) surveyed the literature to 1950, finding 163 acceptable cases and adding 17 more from their own experience; they found 10 instances of bilaterality. Foote and Frazell(1) found three examples of multicentric tumor in 38 cases but supply no details. In 1956, Orloff(13) found 291 acceptable cases, classifying 10 as bilateral and as multicentric homolateral growths.

Approximately, 300 cases of papillary cystadenoma lymphomatosum have been reported in the world literature to date. The present case is presented because of its multicentric origin within the parotid gland and in homolateral paraglandular lymph node tissue.

Case Report

A 60-year-old white male was admitted to the surgical service of the U. S. Army Hospital, Fort McClellan, Ala., for treatment of a left facial mass. The mass had been present for approximately 10 years, during which time it had grown slowly in size. A second smaller mass appeared on the homolateral side approximately two years prior to admission. Some increase in the size of the smaller mass was noted during the weeks immediately preceding admission. Examination at the time of admission revealed an elongated mass located at the angle of the left mandible, and measuring 5 x 3 cm. The mass was not tender or mobile and had a rubbery, hard consistency. It appeared to be contiguous with the lower pole of the parotid gland. The second mass was located in the pre-auricular region of the face at the level of the tragus and measured 2 x 1 cm. Its physical characteristics were similar to that of the elongated mass.

Sialograms of the left parotid gland taken following admission revealed a moderately disassociated area located at the inferior pole of the parotid gland (Fig. 1).

Operation consisted of exposure of the left parotid gland by means of the classic "Y"-shaped incision about the ear with the extension of the inferior arm down onto the neck along the anterior border of the sternocleidomastoid muscle to the level of its insertion beneath the tip of the mastoid process. The upper tumor mass located in the pre-auricular region was found to be lying within the substance of the anterior lobe of the gland. The lowermost tumor mass was found in close association with the inferior pole of the parotid gland. Both tumors appeared to be well encapsulated. Following identification of the facial nerve trunk, the masses were excised with a generous portion of gland substance. An enlarged lymph node was found at the lower angle of the incision lying medial to the sternocleidomastoid muscle at the level of the inferior extension of the incision. This was removed at the time of surgery. The patient's postoperative course was uneventful. Follow-up sialograms one month after surgery were reported as being normal. Examination six months and one year postoperatively showed no evidence of recurrence.

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The pathologist's report consisted of the following: "Sections from all three surgical specimens are similar (Figs. 2-5) in that the bulk of the tissue is made up of a tumor of two distinct histologic components. The epithelial component is arranged in papillary and cystic structures and consists of a double row of cells with a uniform granular pink cytoplasm. The inner layer is less regular, cubodial, and the nuclei are smaller and somewhat irregular in size. In the lumina of the cystic and tubular structures is a granular pink material containing some fragments. The epithelial elements are set in a stroma of dense lymphatic tissue containing germinal follicles. Each specimen is surrounded by a thin capsule. The subcapsular layer of the lymph node is what appears to be a lymphatic sinus. Pathologic diagnosis is papillary cystadenoma lymphomatosum of the parotid gland and of the resected lymph node."

Discussion

In a recent study of the histogenesis of papillary cystadenoma lymphomatosum, Thompson and Bryant(12) supported in essence the original postulate of Albrecht and Arzt(2). Based on detailed examination of embryos, normal human salivary glands, branchiogenic cysts, and 23 tumors, they concluded that the tumor arises from "neoplastic proliferation of parotid ducts included in lymph nodes during the course of

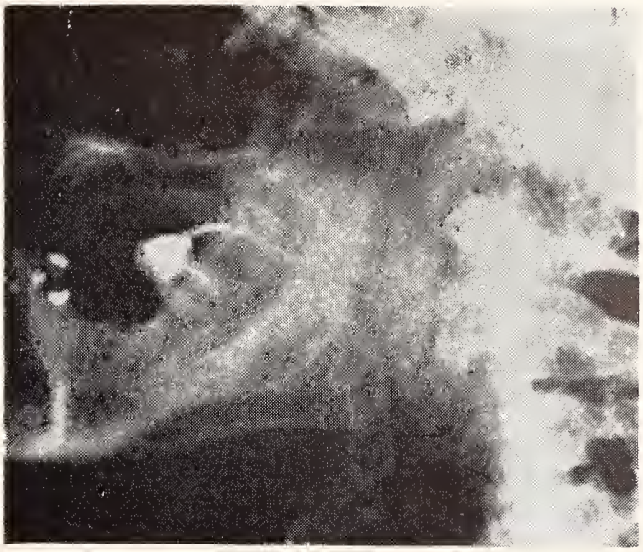

Fig. 1. Pre-operative sialogram of the left parotid gland. Lateral view, showing a moderately disassociated area in the inferior pole.

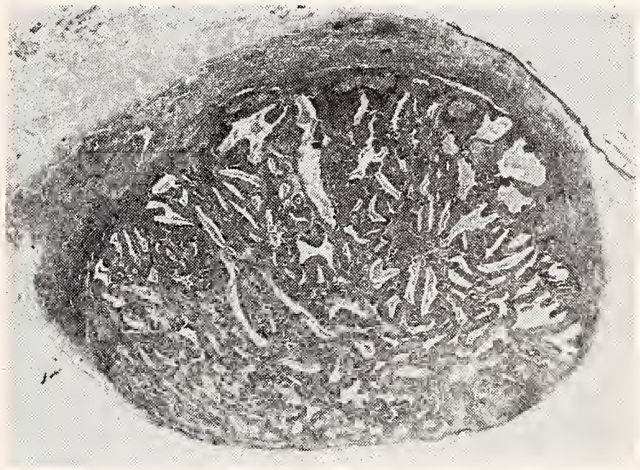

Fig. 2. Low power view of the lymph node showing the complex papillary structure of the tumor and its lymphoid stroma. A crescentic rim of preserved lymph node tissue is seen at the top.

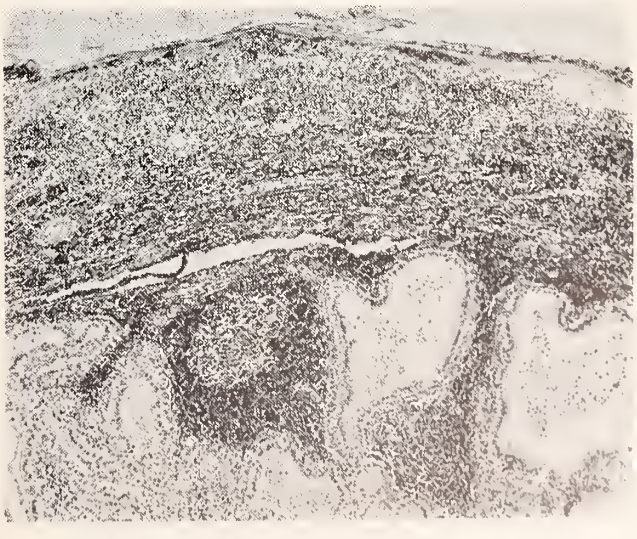

Fig. 3. Medium power view of the crescentic rim of preserved lymph node tissue showing the capsule, subcapsular space, and tumor deeper in the substance of the node.

organogenesis." This is, in fact, an example of tumorigenesis in displaced cell rests during ontogeny. This view is borne out to some extent by Bernier and Bhaskar(15) in their excellent study on a large group of lympho-epithelial lesions culled from the files of the Armed Forces Institute of Pathology. In 1898, Neisse(14) described in 14 newborns salivary tissue within lymph nodes either within the substance of the parotid gland, or in lymph nodes adjacent to its capsule. Foote and Frazell(1) state that in surgical material from hundreds of radical neck dissections they "have frequently found salivary gland inclusions in lymph nodes external to and within the parotid gland. Usually the salivary gland tissue is entirely ductal, but acinar tissue may also be found."

Examples of this tumor reported as arising in the submaxillary gland must be discontinued; the close relationship between lymph node tissue and glandular tissue which is present in the parotid gland is absent in the submaxillary gland. Presumably, the proximity of the inferior aspect of the anterior lobe of the parotid to the posterior superior surface of the submaxillary gland is the site of origin.

The observation that a small but consistent percentage of these tumors arises as multicentric foci within both intra- and extra-glandular lymph nodes is consistent with an origin in embryogenetically displaced epithelial inclusion. The observation of bilateral tumors implies that the stimulus to tumor growth may be generalized rather than local. However, neither multicentricity nor bilaterality proves either point beyond peradventure of doubt. Multicentric origin of a benign tumor may be a "field effect." Bilateral occurrence may indicate merely that local stimuli are present on both sides at the same time. Conjecture about mechanisms of growth remain speculative so long as the stimulus remains undefined, even though the anatomic target is recognizable. It is of some theoretic interest that no example of a clinically latent papillary cystadenoma lymphomatosum, i.e., a "microtumor," should have been found in the many thousands of lymph nodes examined incidental to radical neck dissection, and that no case has been reported in which removal of a unilateral tumor was followed after a decent interval by the development of a contralateral tumor.

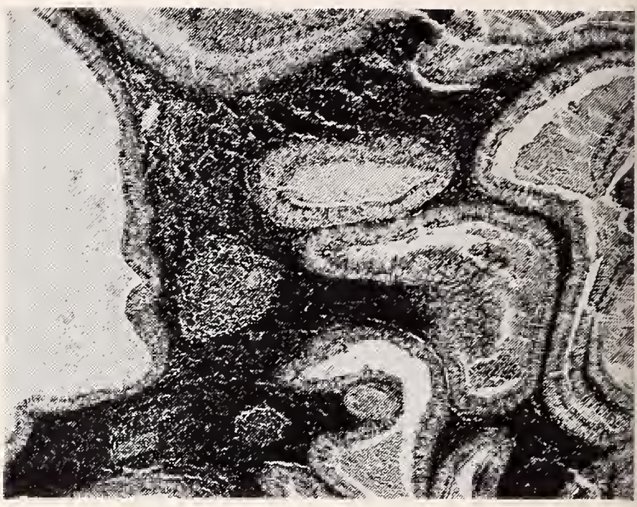

Fig. 4. Medium power view of a field from the larger of the two tumor nodules from the substance of the parotid gland. Spaces lined by a double layer of epithelial cells are separated from each other by a stroma of densely packed lymphocytes in which a few germinal centers are seen.

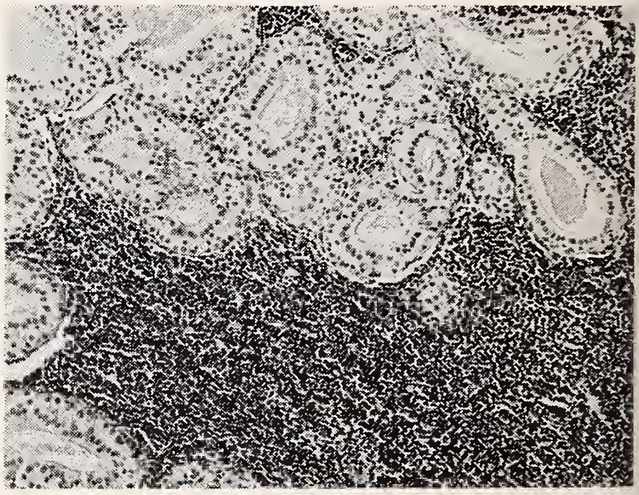

Fig. 5. High power view of a field from the smaller of the two tumor nodules from the substance of the parotid gland. The double layer of cuboidal epithelial cells with eosinophilic cytoplasm is clearly seen and the uniformity of the lymphoid stroma is apparent.

Conclusion

(1) A case of multicentric homolateral papillary cystadenoma lymphomatosum arising in the left parotid gland and in a nearby lymph node is reported.

(2) The occurrence of proliferative ductal epithelium within lymph nodes both as a primary neoplastic process and as a multicentric tumor growth is dependent upon the embryogenetic inclusion of displaced parotid ductal epithelium within the substance of lateral cervical lymph nodes.

(3) The anatomical proximity between the inferior portion of the parotid gland and the posterior portion of the submaxillary gland may be responsible for erroneously attributing neoplasms arising from the pariotid gland in this region to the submaxillary gland.

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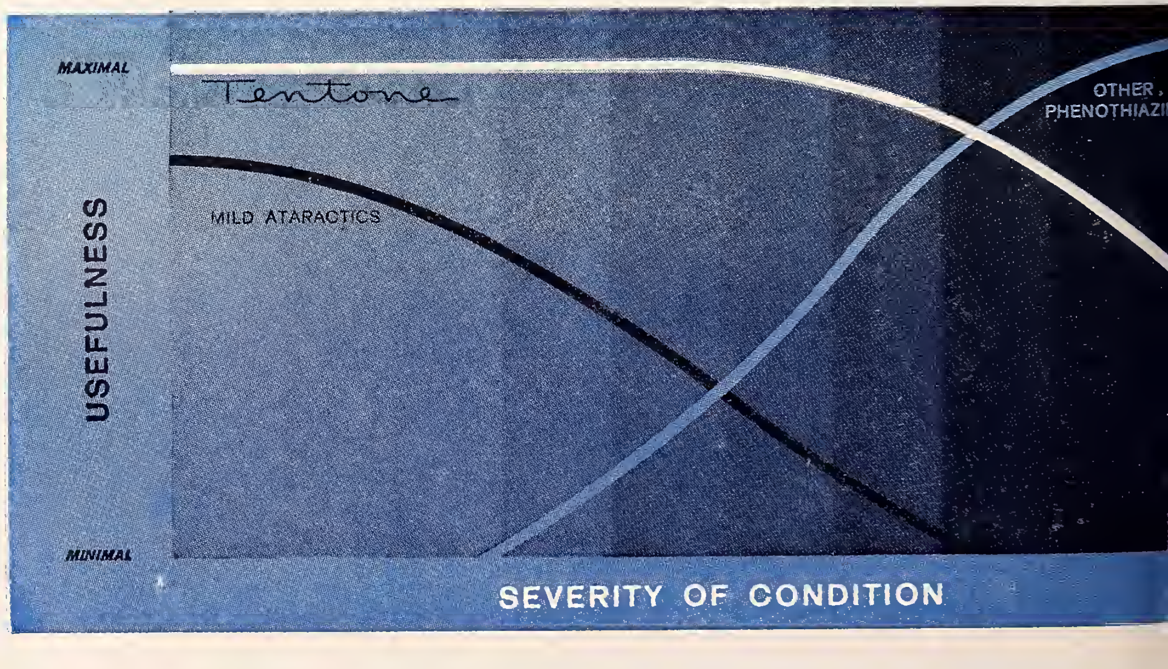

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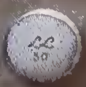

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Current Trends in Medical Education

TRANSITIONAL PROBLEMS FROM A TWO-YEAR TO A FOUR-YEAR MEDICAL SCHOOL*

Roscoe L. Pullen, M.D.

THE DECISION to expand the University of Missouri from a two-year program to a four-year program was reached after 50 or 60 years of heated debate in our state. The decision to expand was primarily based upon the fact that Missouri ranks number three in the United States in the number of people on welfare rosters, exceeded only by New York State and the State of Louisiana. These people on the welfare rosters, for the most part, live in small communities throughout Missouri. Missouri has a large number of small communities or farms for which there is an insufficient number of general practitioners to care for them. The state, after 50 or 60 years of organized effort and exchange, desired to expand the health program with the hope of recruiting more general practitioners for rural Missouri. There are sufficient doctors in St. Louis and Kansas City, and in the larger metropolitan areas of Springfield, St. Joseph and Cap Giradeau.

Now I could talk for two weeks, one hour, or 10 minutes, about the troubles of trying to expand from the two-year program to a four-year program. I want to emphasize the points already brought out by Dr. Hard and Dr. Bowers. First, there is no such thing as a two-year or a four-year medical curriculum, there is only a 40-year medical curriculum; it's a lifetime curriulum. Secondly, if a school begins as a two-year program, chances are that the organization will be along the departmental lines of anatomy, physiology, pharmacology, pathology, preventive medicine and micro-biology. The majority of the faculty will be Ph.D.s or professional teachers. Clinicians should be added on a voluntary basis to supply needs in physical diagnosis, and some other areas including psychiatry. If you should start with that type of faculty and expand to a four-year program, you immediately run into serious difficulties. This type of faculty, professional teachers, living on a campus of a university, want to follow the same rules and regulations as the rest of the faculty. This means a school year of nine months and then three months' vacation for the summer time and a vacation for the Christmas and other holidays. These professional teachers simply do not appreciate that M.D.s have to work at night and Saturday and Sunday. You will find immediately that friction develops in the faculty when you convert to a full time basis around the clock, 365 days a year. You will also be disappointed in the fact that the faculty of a two-year school can be of little assistance to you, as Dr. Bowers has brought out, in the organization of a university hospital. They simply do not understand the terminology and problems. When we started out, some of the men didn't even know what the word residency or internship meant. It is one of the most serious problems that you will face in the development of a medical center. I have no immediate answer to it, as no one else has at the present time.

I would like to point out to all of you, as members of the profession, that the American hospital is a community enterprise. It is among the five largest industries in the United States. The payroll of American hospitals can be compared to the U. S. steel industry. The American hospital is also an educational and service enterprise, and should encourage research in all phases of health. For its educational functions, the problem of training the ancillary health personnel, brought out by Dr. Bowers, is a very serious one, because practicing physicians need these individuals in their practice. This calls for the skills of all the people on the health team. Last year the U. S. Public Health Service published a manual on this topic, decided that there are 166 job classifications in this category at the present time. Nearly every one of these demand training in the university hospital or a teaching hospital.

Finally, I think we ought to look at the organization from the two-year to the four-year program with regard to something which has not yet been touched on this morning, e.g., from the point of view of the students themselves. The majority of our students are married. Married couples do not like to pull up stakes twice a year to move back and forth to the campus. And that's quite a job, especially when they have one or two children. So they prefer to get more or less permanently settled. So one has to think in terms of the student himself; they are changing also. Thank you very much.

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*Presented at the Arizona Medical Association Annual Meeting, May 1959, Chandler, Ariz.

CURRENT TRENDS IN MEDICAL EDUCATION*

John W. Cline, M.D.

THERE has been a great change in medical education in the past half century. Fifty years ago, practically all medical education was didactic. The student was lectured to by various members of the faculty. He was in no sense a member of the medical team.

This condition persisted in many places as recently as 25 years ago. Unfortunately, it exists to some degree in certain schools at the present time. As the medical schools are surveyed by teams representing the executive council of the AAMC and the council on medical education of the AMA, we find that some institutions still are living, in part, in the era of 25 years ago.

For more than 25 years, the trend has been away from didactic instruction and toward small group and bedside teaching. The student thus comes into more intimate contact with the patient and with the instructor. He gains far greater knowledge by this means than he would in the lecture hall. In his clinical years an effort is made to give him a sense of responsibility for patient care.

There also has been a tendency to treat the medical student as a mature graduate student, which he is. As such, he is responsible for a large part of his own education. Learning is an active and not a passive process and requires the effort of the individual to learn. "Spoon feeding" in medical education has been greatly reduced and further reduction will take place.

There has been a trend away from the concept that the student should acquire a vast number of facts which may be unrelated or poorly related. He should be, and to an increasing degree is being, taught to think in a logical manner. He is taught where and how he can acquire the information he requires, and how to use it after he has acquired it.

A limited amount of didactic teaching is valuable for the purpose of orienting the student in his endeavors and conserving his time. The bulk of lectures, however, should be devoted to the presentation of new material not yet available in the reference sources to which the student has ready access. It should be the student's responsibility to acquire the knowledge which can be obtained from standard reference works.

There has been a progressive departure from old structural concepts toward the concept of function. The hours devoted to gross anatomy have been reduced. Much more emphasis is placed upon the physiological and biochemical aspects of the human being in health and disease.

Increasing co-ordination of the teaching in pre-clinical departments is apparent. An effort is made to correlate the presentations by different departments to allow the student to relate structure and function, the alterations in both which are produced by disease, and thereby obtain a more complete picture. In some instances the faculties of different departments make conjoint presentations for the same purpose.

There is an ever-increasing relationship between the pre-clinical sciences and clinical medicine. Many clinicians now have broad knowledge of the basic sciences. They can teach portions of these courses and at the same time demonstrate the application of scientific knowledge to the actual practice of medicine. This is a stimulating experience for the student and gives obvious purpose to the hard work which the basic science courses require.

To a lesser extent, there is a tendency to draw upon members of the faculty in other departments of the university. Pure science, as opposed to applied science, has much to offer medicine. The chemist, the physicist, the geneticist, the statistician and others are called upon to assist in medical education.

It is customary to divide our medical schools into two categories; the research school and the practice school. Our more distinguished institutions belong in the former category. The existence of research programs enhances the academic atmosphere of the school and this is of benefit to the student. It is generally accepted that a portion of the responsibility of a medical school is to add to existing knowledge. This can be done only through research. It may well be that the teacher interested in research usually stimulates students to a greater extent than one who is not.

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*Presented at the Annual Meeting of the Arizona Medical Association, Chandler, May 1959.

While research is a vital part of a medical school program, its extent will vary according to the availability of facilities and the number of the faculty interested in this activity and capable of carrying it on. Students may be stimulated to do some research and not infrequently a student may be temporarily or permanently diverted from his medical course to engage in research.

In some institutions, however, research has become a fetish. The primary purpose of a medical school is to train doctors to care for the sick. When one loses sight of this fundamental goal, the teaching program is bound to suffer. In some of our schools, research has become overemphasized and some of those engaged in it sneeringly refer to schools with well balanced programs and illustrious pasts as "trade schools."

Research is important, but it is only one aspect of the function of the medical school. If stressed to the detriment of sound scientific and clinical teaching, it will result in harm to medical education.

There has been a trend to introduce the student to clinical medicine earlier in his career. This tends to give him a greater interest and to lighten the load of drudgery of the preclinical years. If the student percieves the purpose of basic scientific training, he undertakes it with greater zest.

Recent years have witnessed a reduction in the required hours of the curriculum. When the student's time is occupied to too great an extent by required exercises, he has little opportunity for study, reflection and the pursuit of special projects in which he may have an interest. The councils invariably criticize curricula which require too many hours devoted to prescribed activities.

Some schools give free time to the student and permit him to use it as he chooses. Others require that the time be used for some serious purpose. Research is encouraged. In every class there is a limited number of students who have the capacity for research and an interest in it. Their interest may be stimulated and their capacity developed by this means.

The AMA council and that of the AAMC encourage experimentation in medical education. They are greatly interested in the quality of the product of our medical schools, but only to a limited extent in the method by which high quality is attained. There is no set formula for achieving a good result. One cannot be complacent about our present systems. Complacency leads to mediocrity and stagnation. The advances in medical education to date have been the result of the imagination and initiative of educators who were not satisfied to live in the past.

There are interesting experiments in medical education in progress at the present time. Some represent rather sharp departure from the "traditional" type. One such is found at Western Reserve and another of which you will hear more in the course of this meeting is at Johns Hopkins. One is in progress at Stanford. The results of such experiments are publicized and can be adopted by other schools or adapted to local conditions.

A new method is not necessarily good because it is new, nor an old method bad because it is old. The new and the old must be evaluated and their worth determined. Experiments should not discard methods of demonstrated value unless there is greater promise in new methods. Active curriculum committees are encouraged. They should study the curriculum content and methods of instruction almost constantly and recommend changes which they believe to be beneficial.

No one seems to be completely satisfied with the methods employed in choosing medical students. Applicants for admission are carefully investigated and screened. The methods now employed are reasonably good, but certainly could be improved. The important question is how this can be accomplished.

One must view medical education as a progressively evolving field of activity. It cannot afford to be static. We must seek to improve it, but in our zeal to do so must not lose sight of the fact that the primary function of a medical school is to train doctors. Other aspects of medical education are important, but must always be subordinated to the basic purpose of the medical school.

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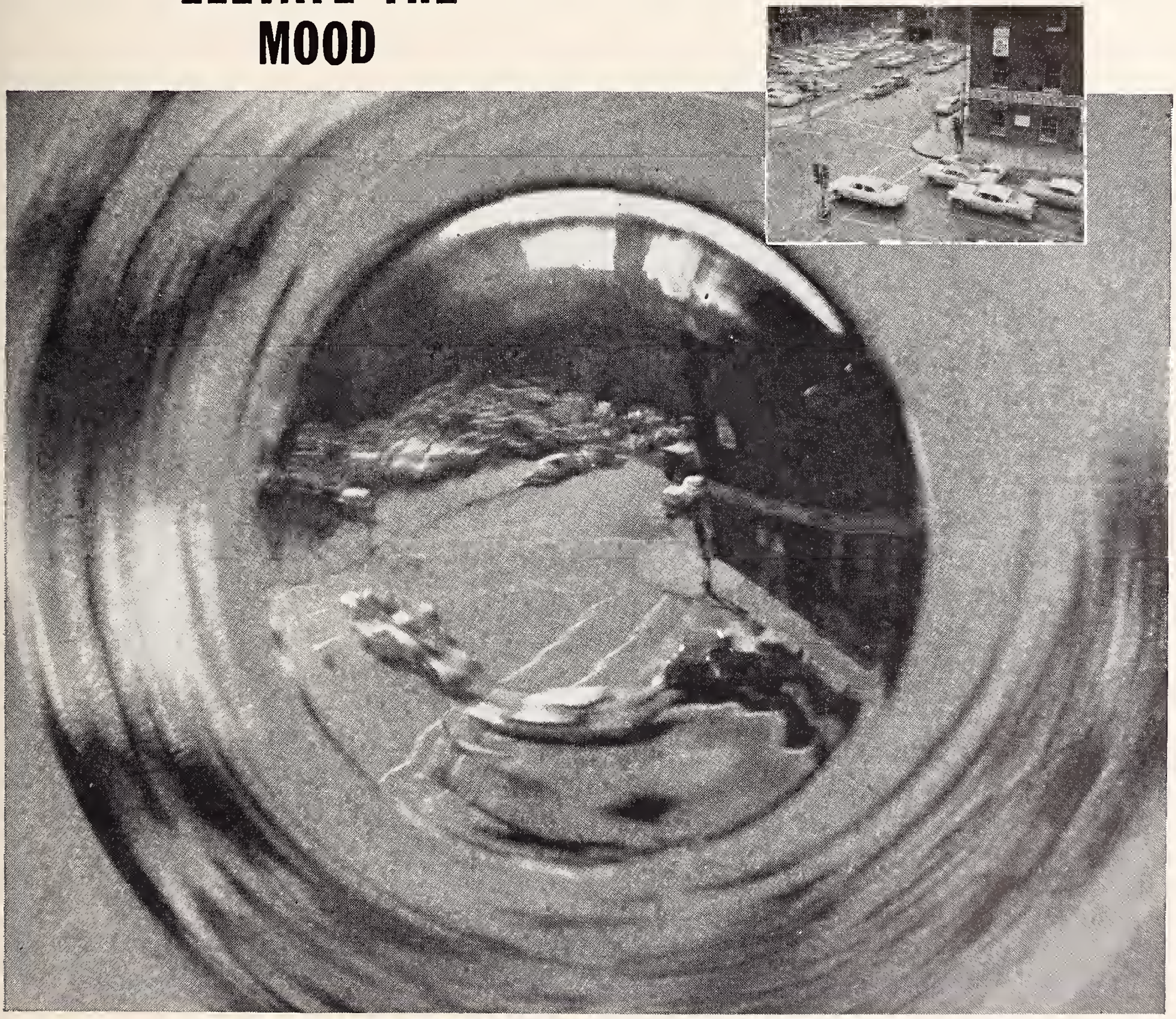

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*Pratt, R. T. C., and McKenzie, W.: Anxiety States Following Vestibular Disorders, Lancet *2*:347 (Aug. 16) 1958.

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Research in the Service of Medicine **SEARLE**

MEDICINE'S ROLE IN HUMANITY'S GREATEST ADVENTURE*

R. G. Gustavson, Ph. D.

DR. MELICK, Dr. Cline, and members of The Arizona Medical Association. When I received a very cordial letter from Dr. Melick inviting me to participate in this very interesting conference, I felt sure that he had written to the wrong Gustavson, because at the present time my interests are related to such questions as: Is there enough energy? Is there enough water? Is there enough land? What about the metropolitan problems of large cities? He insisted that I was the fellow he wanted, so here I am. I appreciate very much the invitation to discuss the very important problems concerned with medical education. I would like to put these problems in a setting which I will call, "Medicine's Role in Humanity's Greatest Adventure." This adventure is the attempt to live the good life in a world made good.

I have listened carefully to the very fine talks that have been given and as each man has spoken, it seemed to me that I could document what he said out of my own experience. Reference was made, for example, to our increase in population and its implications for medical education. This is a subject that is of great concern to anyone concerned with natural resources. Today we are witnessing an unparalleled population increase. In fact, of all the human beings that have ever been born, 5 per cent of this number are now alive. If Adam and Eve lived 2,000 years ago, and the population increased on the average of 1 per cent a year, the present world population of over some 2.5 billion can be accounted for. If they lived 5,500 years ago, and the same average of 1 per cent a year increase in population took place, the present population would be 10 to the 27th power. This tremendous number has not been reached because disease, starvation, and war, have kept the increase checked. Today modern medicine is making great inroads on the death rate from disease; modern agriculture is increasing our food supply, and we all hope and pray that another war may not be the lot of the human race. The death rates are diminishing the world over, the birth rate has not been altered significantly, hence the population explosion. This means more health services of all kinds.

Modern medicine is a child of modern science. It has been a good child in that it has also been a fine contributor to science. The great universities of our own country and of the world in general have nurtured basic science. For this reason, a strong medical school will usually be an integral part of a strong university. In my own experience, whenever the medical school is separated geographically from the university, neither institution is as strong as it could be.

In the world of science, man's greatest achievement has been the realization that he lives in a consistent universe; that is, if he asks nature a question by way of experiment at two different times and the conditions of the experiment are the same, nature will give identical answers on both occasions. The path from the concept of a universe ruled by caprice to the concept of law is a long and difficult one. Gradually a body of knowledge which we now call science has been established. Prof. Niels Bohr, distinguished atomic physicist of Denmark, has described this body of knowledge as resulting from "the finding of techniques that have enabled man to place limiting values on his preconceptions."

Aristotle and Galileo started with very different preconceptions. Aristotle's conviction that when bodies fall to the earth they fall with a velocity depending upon their weight seems common sense. This idea was generally accepted for thousands of years. Galileo thought that bodies fall with velocity independent of their weight. This did not seem like common sense. Galileo carried out a visual demonstration, according to tradition at least, by dropping bodies of different weights from the top of the Leaning Tower of Pisa so the students and professors of the university could see them fall side by side. The difference between Galileo and Aristotle was not primarily in the significance of their convictions, because if either conviction had led to the simple experiment of falling bodies, the true nature of the velocity of falling bodies would have been discovered. It is the technique which is important. This is the basic philosophy of science.

No Easy Task

To develop techniques that will place limiting values on our preconceptions is not an easy task. The experience of the physician, Jean van Helmont of Belgium, who was born in 1577 and who was touched with the new learning of Harvey, Galileo, and Bacon, is instructive. Van Helmont was a careful observer and an exact experimenter. He believed that water was the chief, if not the only ultimate constituent of all matter. He showed that plants could grow though they apparently received nothing but water, and so he argued that wood had been formed from water alone and that the carbon in wood came from water. He had an unknown factor in his experiment, only a small factor; one part of carbon in the form of carbon dioxide in 10,000 parts of air. Yet this small factor is the difference between finding truth and missing it.

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*Presented at the Annual Meeting of the Arizona Medical Association, Chandler, May 1959.

Every physician is familiar with the difficulties of finding truth if several factors are involved. The cyclical charater of pernicious anemia is a case in point. One need only read the reports of Minot and Murphy on the treatment of the disease with liver to see how concerned they were about reporting positive results prematurely.

Finally prejudice, clinging to deep-seated convictions, can blind us to truth. The work of Scott as early as 1912 is a case in point. Scott produced experimental diabetes in dogs by removing the pancreas; he ligated the pancreatic ducts in other animals to bring about a degeneration of the acinus tissue; he then made extracts of these glands in which the acinus tissue had degenerated so as to prevent the presence of proteolytic enzymes and injected these extracts into the diabetic experimental animals. He observed a decrease in the urinary sugar, but because his animals developed a temperature, he concluded that his results were due to an artifact reaction which was the opinion of his professor. Insulin might have been discovered 10 years before it was discovered by Banting and his colleagues had not the preconceived notions prevailed.

But in spite of these difficulties, science has given us a remarkable control over our environment, and the thesis that I would like to speak about briefly is that medicine is the oldest of the arts and the sciences. Oldest in the sense that some of our oldest records, inscriptions, or carvings, relate to medicine. You can find, for example, a stone carved in ancient Egypt many years before the birth of Christ, showing a mother sitting with her baby who is apparently suffering from rickets, the sun in the background showing that the Egyptians knew something about the relationship of sunshine to rickets.

But medicine is also the youngest of the sciences. Let me briefly defend the thesis that every advance that has been made in the physical or the biological sciences, with very few exceptions I presume, has been reflected in advance in medicine. You remember, for example, that it was Lavoisier's discovery of oxygen that gave us a whole new concept of the burning process and the origin of heat. Lavoisier immediately turned his attention to the problem of the source of animal heat. It was necessary for him to perfect first a means of measuring heat, so with the aid of his great compatriot Laplace, he made an ice calorimeter. This calorimeter consisted of a double-walled can. In the space between the walls cracked ice was placed. This prevented any heat from reaching the interior of the can from the outside. In the interior there was placed a cage which would hold a guinea pig and this cage was packed in ice. The heat given off by the body of the animal melted some of the ice in the interior compartment and the water from this melted ice was weighed. Knowing the heat of fusion of ice he was able to calculate the amount of heat liberated by the animal.

Of course, arrangements had to be made for the in-go and out-go of air for respiration in another apparatus in which the carbon dioxide exhaled could be measured. He also determined the amount of heat and the amount of carbon dioxide from a burning candle in the same apparatus and in this way showed that at least 96 per cent of the animal heat came from burning carbon. This experiment was the beginning of the refined experiments carried out as a routine medical procedure in measuring basal metabolism.

Early Examples

If you look at the early work in organic chemistry, for example, you will see this same close relationship. I suppose every student of chemistry has read as the opening sentence in his organic chemistry: The first organic compound to be synthesized was urea, synthesized by Friedrich Wohler in 1828. It turns out that Wohler was a medical student under Brezelius in Scandinavia and that one of the experiments that Berzelius demanded of every medical student was to collect some of his own urine, evaporate it and then obtain in crystalline form, the urea which was present. These were the days when Mitscherlich was a strong force in chemistry, a man who believed that crystal structure would help you determine formulas of compounds. So every medical student had to observe these crystals and draw them with great care. It was after that experience as a medical student in the laboratories of Berzelius, that Wohler was trying to recrystallize some ammonium cyanate. The ammonium cyanate which he obtained by crystallization was not the ammonium cyanate which he started with. It didn't have the same chemical properties. He examined it under the microscope. He states in a letter to Berzelius that it resembled the crystals of urea he had isolated in the laboratory as a medical student. This is the beginning of organic chemistry. If you look at the early work on the structure of fats by Chevreul in France, you have the beginnings of all of our interests in fat metabolism. The great work of Emil Fischer on the sugars was basic to understanding sugar metabolism. The basic work of Kossel and Fischer on the proteins and the purines turns out, of course, to be basic to much of the progress made in medicine. If you look at the discovery of the X-ray by Roentgen in the last part of the previous century, you are amazed at how quickly this became applied to the study of medical problems; and now with the studies of artificial radioactivity given to us by Joliot of France, we have again seen this reflected in the advances that we have made in medicine. It is a perfectly astonishing thing to see, for example, how the metabolism of the steroids is being unraveled. Here you have a very complex ring, a derivative, as you know, of phenanthrene with a five carbon ring added to it. What a complex metabolism these compounds must have! And yet real progress is being made. How? Take estrone, one of the female sex hormones, for example. The so-called "A ring" is an aromatic ring of typical benzene structure, which doesn't oxidize readily. Radioactive Carbon 14 is introduced into the A ring. The oxidation products will be found in the urine of a patient who has taken this material and may be isolated by extraction methods. These materials isolated from the urine are subjected to paper chromatography. The amounts of the different substances may be determined by the radioactivity of Carbon 14. It's perfectly amazing what detailed information one can obtain by these latest advances. In the paper presented yesterday, dealing with the chemistry of Cushing's disease, (some of you commented on the complexity of modern chemistry) you were seeing a reflection of this basic work in science.

And today, of course, the progress that is being made in the biological sciences, especially in microbiology, is having a tremendous influence on the information that we have for the practice of medicine. Take, for example, the problem of placing an oxygen atom on Carbon 11 of the steroid ring. The organic chemist would have great difficulty in placing an oxygen atom on this particular carbon atom and nowhere else. But think of the tremendous simplicity that has been arrived at in finding a micro-organism that will take oxygen from the air by processes quite unknown to us, producing a 92 per cent yield of the Oxygen 11 compound. This is not small potatoes. Upjohn, I am told, sold $33 million worth of this compound last year without, as far as I know, splitting any of the dividends with the bug who did the work. We could go on and point out these close relationships between the basic sciences and progress in the field of medicine, but this would merely be preaching to the converted. What significance does it have for the problem that is being discussed at this conference? A number of speakers have said a strong medical school must find its home in a strong university, because the relationship of the basic sciences to the medical sciences is so important. I have tried to give this same command from history.

Another Problem

Now let me turn your attention to another problem that you discussed in the conference that we have had today. There was some concern expressed over the fact that the quality of the medical student has not been improving. This is a very serious problem. You might also be interested in knowing the results of examinations that have been given for various scholarships and fellowships that are under the control of the National Research Council. Measured by the general examinations, you will find that the people who are taking the exams in physics and chemistry and mathematics rank high. Students in the general field of biology rank much lower. Why? This requires some concern when you remember many scientists believe that the next great fundamental breakthrough in science is going to be in the biological sciences, a breakthrough which will probably be even greater than the breakthrough we had in connection with the physical sciences, atomic structure, and atomic fission.

How are we ever going to achieve such breakthroughs or make our contribution to it as a nation if these tests represent the quality of people in the reservoir from which we are to draw our biological sciences? I think this had something to do with high school education. We have traditionally given a course in biology to the ninth grade student; it has been descriptive biology. This is followed by physics in the junior year and then chemistry in the senior year. What kind of advice is being given to students by counsellors? They have indicated that if the student was good in mathematics or good in physics or chemistry, he should be a physicist, a chemist, or an engineer. If he could draw well and was interested in biology, he was advised to take up biology because biology was morphology. This is not modern biology. Modern biology is molecular biology; it is dealing, as you well know, with dynamics of the living cell. There is probably no better way to obtain fundamental information about the living cell than by using the tools of physics and chemistry and mathematics. So there is no greater opportunity before the youngster of tomorrow, if he loves physics, chemistry, mathematics, or, in other words, if he likes to think logically, than in the field of biology. And it seems to me this calls for a revision of the high school curriculum and high school counselling. Biology in the ninth grade will give the student a picture of the living world, including some basic knowledge of biological evolution. This can be largely morphological. In the second year, chemistry; chemistry has concepts that are relatively simple at that stage and the mathematics is certainly not beyond sixth grade mathematics. Then physics in his junior year. By that time the student will have accumulated a knowledge of algebra that will enable him to approach the problems in physics with a new tool. And then in the senior year, an opportunity to take a number of electives, but among them a second course in biology, where the student will be given the opportunity to learn something about the dynamics of living cells; to have some knowledge of enzyme action, for example; perhaps to extract a leaf for the green-coloring matter; to submit this to chromatographic analysis, which is simply done with paper, and let him see that this simple process separates out a series of compounds. In other words, let's give him a picture of modern biology so that when he goes to the university he will have an opportunity to see that science today is pretty uniform in its basic demands, and the opportunity to use all of the physics and all of the chemistry and all of the mathematics that he can gather together can be applied to the more complex problems of biology and this, of course, means basic support for the field of medicine.

I was interested in the comments that were made by Dr. Cline in his remarks this morning about the tremendous importance of having teachers who were not teaching didactically, who do not stand before the students and read a book to them; but teachers who were really stimulating the student to learn and discover for himself, something which Dr. Turner and others emphasized in their talks. And as they were talking, I could not help but think of one of the greatest teachers that it has been my privelege to have and to work with, namely, A. J. Carlson of the University of Chicago. Anyone who took his physiology courses in the medical school, or as a graduate student, dealing with blood and circulation, could repeat for you that opening day's lecture, where he would say, "I am not going to tell you what is in the textbooks, this is an insult to your intelligence. I am not going to tell you what you will find in the laboratory, this will dull your curiosity. I am here to give you the spirit of physiology." And this is what he gave us.

The question of establishing a school of medicine in a state is a large question, fraught with many problems. At this conference, some of the broad outlines of some answers to these problems have been given. Should a school of medicine be established? Where should it be located if the decision is to establish one? What kind of a hospital should be associated with it? How can the best possible relations be established with the practicing medical profession? How many full-time professors will be needed? What limitations should be placed on outside practice of the full-time faculty? What should be the position of a part-time faculty? What remuneration should they receive? What is the place of research in the proposed school? What opportunity should be given for graduate work? How much will a good institution cost? The American Medical Association and the Association of

American Medical Colleges will not recognize a poor school. What answers can be given to these questions? The worst thing that can be done is to try to answer these questions on the basis of political numbers. A medical school is not a trophy for a chamber of commerce. A careful, intelligent survey is strongly indicated. Freud said, "The voice of the intellect is a very gentle voice, but it is a very insistent one." Let us listen to that voice. George Eliot also spoke words of wisdom when she warned us not to be optimists, because an optimist can be unrealistic with respect to what we can achieve. Let us not be pessimists, because that would mean we have no faith in the future. Rather let us be ameliorists, that is, if things are not as they ought to be, everyone will lend his hand, his head and his heart to make them right. This counsels patience.

Let me close by saying I lived through the struggles at the University of Colorado as president of that institution, where we had great difficulty in adjudicating misunderstandings between the practicing profession and the medical school. I lived through it again at the University of Nebraska. I saw the struggle as it took place at Chicago. Let me make this suggestion to you. There is a tremendous amount of wisdom to be distilled out of these experiences; there is absolutely no need for you to relive these experiences. Consult with the people at the Universities of Colorado and Nebraska. There is much help to be found there.

God bless you in your efforts. Thank you.

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THE FOUR-YEAR MEDICAL SCHOOL*

John Z. Bowers, M.D.

ARIZONA is to be commended that her physicians are taking such a serious interest in the problems relating to the establishment of a medical school.

The beginning of a two-year, but particularly a four-year program, brings a medical school and its faculty, both pleasant and unpleasant dealings with the local medical profession. Medicine has been harmed by the conflicts that have erupted recently in various communities between the medical profession and medical education. Some of the figures that Doctor Hard showed us on the decline in the academic excellence of students coming to medical school are based in part upon what I might call "poor public relations" of medicine. Bilateral-communications and understandings are needed. I would impress upon you the importance of medical schools and the medical profession working together, particularly in the beginning years when hostilities can appear.

The trend in medical education in the United States today is to the four-year medical school. During the past 10 years, a number of two-year schools have moved into four-year programs. Why has this occurred? I think that one of the important factors relating to it, is the concept that has arisen within the United States in the last 15 years, of the medical center. And let me suggest that Arizona, in considering the initiation of a program in medical education, should not be thinking just about the problems of a two-year or a four-year medical school. It seems to me your problem is far broader, far more intriguing and of far greater significance than a two or three-year medical school. Your fundamental concern should be, does Arizona need a medical center? The medical center concept includes education, service, and research. It includes a number of educational areas in disciplines beyond the education of medical students. It includes the training of intern and resident physicians. In passing, let me note that good intern and residency programs can do a great deal to attract fine young men and women to practice in a state. There is a real "Westward, ho" movement going on among our medical school graduates today. In the last senior class at a Midwest university medical school, over 70 per cent of the graduating class applied for internships on the West coast. We see this at Wisconsin. I have wondered why more students do not go to Arizona for internship. I suspect that you have not recognized the role of internship and residency programs in attracting physicians. You should exert more effort and attention to developing good intern and good residency programs. One aspect of the medical center program is the preparation of nurses in the baccalaureate programs. We spend a great deal of time worrying about why we cannot find nurses to do bedside nursing. Why are our nursing schools said to be turning out administrators of nursing, rather than nurses? Nursing education is a vital force in helping our country today. A medical center for a state should train nurses. Does Arizona need a greater supply of nurses? A nursing school in a university setting can help a great deal in this manner.

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*Presented by invitation at the annual meeting of the Arizona Medical Association — May 1, 1959, Chandler, Ariz.

What are some of the other educational programs that one accomplishes in a medical center? The training of physical therapists is an important program in a medical center as is the training of occupational therapists. These two important groups work very effectively on the health team, in rehabilitation. Occupational therapy is certainly an essential part of the team in psychiatry.

The medical social worker is an individual of growing importance in medicine. A modern medical center is also interested in contributing, as Doctor Cline pointed out, to the original fund of knowledge. We, therefore, find research programs to be of growing importance. Research is the spark in medicine today.

Medical care today, and I hope even more so in the future, is a team problem.

University hospitals and private hospitals use the nurse, the physical therapist, the occupational therapist, the medical social worker, the medical technologist, the dietitian, the X-ray technician, and the clinical psychologist. All of these fields are essential to the total health development and effort of a state. Arizona should review its needs in a wide variety of health professional areas, rather than simply medicine.

Research and Hospital Programs

I subscribe to Doctor Cline's comments about research and the problems that it raises; but can one attract a good medical school faculty today, either two-year or four-year, without having research as an essential component of the medical program? One must realize that the public pressure on medical schools to carry on research programs is great. The congress of the United States has added a number of millions of dollars to the appropriation for the National Institutes of Health, beyond the figures that were recommended by President Eisenhower. The congress, representing the people of the United States, are deeply devoted to medical research. Large amounts of money are made available, and medical schools are certain to be active in research programs.

An important aspect of the development of a four-year medical school and the major change which occurs between a two-year and a four-year program, is the need for clinical material and the development of hospital programs. University presidents often say that medical schools would be more easy to live with if it were not for the need of a university hospital. The responsibility for clinical activity and the undertaking of hospital management changes the operation of a medical school. Now what are some of the problems a four-year medical school offers medical care, bringing the school into active public service? One of the key problems about a hospital teaching program is the cost that is entailed. The cost of operating a hospital and the cost of manning clinical departments is a highly significant one. The hospital costs are soaring today. In a state university hospital, the bill is paid by the legislature, and legislators are often shocked at the cost of running a university hospital. One does not rely solely on university operated hospitals; one also has to undertake teaching programs in other hospitals. In psychiatry, the feeling today is that medical students need experience in state mental institutions. Medical students may need experience in tuberculosis hospitals. The need for access to rehabilitation programs, and to other specialized disease areas, multiples the problem of the four-year medical school in its hospital relationships.

Another development that compounds the problem of the four-year medical school is that the teaching program has moved away from the classroom and onto the ward. Today the lecture room plays a lesser role in our clinical teaching programs. A four-year medical school needs access to an adequate supply and variety of clin-

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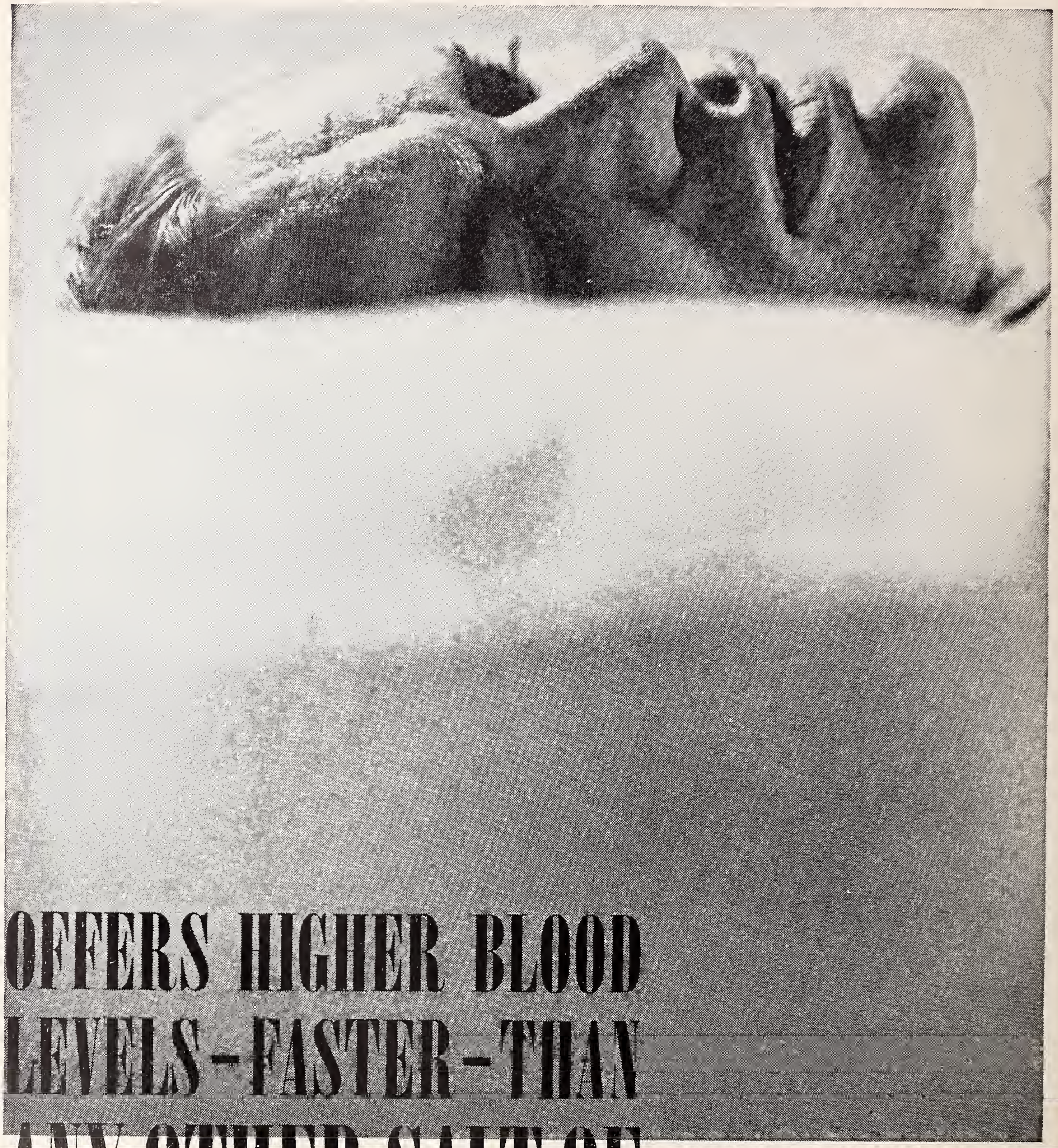

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ical material in its teaching hospitals. This is most important. The education of a junior student is primarily oriented to the bed patient. A junior medical student cannot listen to a heart for two or three minutes and decide whether there is a mitral-systolic murmur or an aortic-diastolic murmur. He needs an opportunity to go back to the patient, he needs to have an instructor to go back with him. He needs to have that patient where he has easy access to him.

In the senior year, the major teaching effort in many schools is in the out-patient department, so that it is important that in any talk about a four-year medical school, one recognizes the need for access to out-patient material. In most instances this has been primarily indigent material. The teaching of clinical medicine is undergoing very great changes because many of our medical schools face problems in an adequate supply of teaching material. The number of indigent patients available for teaching has been steadily declining. The number of patients who have insurance coverage grows steadily. Our teaching, therefore, is being oriented toward the private patient. I might say in passing that I have never heard a private patient complain about association with a medical student. The major complaint in my experience has been from the faculty members, who do not like to have their private patients used in teaching.

A four-year medical school should have its clinical departments primarily manned by a hard core of full-time or geographical full-time men and women who are in the medical school and the teaching hospitals. The use of volunteer or part-time faculty can be of great value. The size that clinical departments assume today is staggering. There are areas of very serious shortage in the clinical programs. Psychiatry, radiology and anesthesiology are in short supply. Let me make two final points. First, in the move from a two-year to a four-year program, the number of young men and young women applying for medical school, rises rapidly. A state will be able to attract a far larger number of young men and women into medicine if it operates a four-year medical school program and a complete medical center as compared to the two-year program.

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ARIZONA MEDICINE
Journal of
The ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 16 OCTOBER, 1959 NO. 10

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The Editor is always ready, willing, and happy to help in any way possible.

(The Opinions expressed in original contributions do not necessarily express the opinion of the Editorial Board.)

THE ANCILLARY WORKER IN OPHTHALMOLOGICAL MEDICAL PRACTICE

THE OPTICIAN

A RECENT pamphlet published by the National Medical Foundation for Eye Care defines the services of the optician and his relation to the ophthalmologist and outlines some of the legislative pitfalls which might befall him in the future.

In the modern practice of medicine, the physician is aided by numerous technical assistants who, when classified, fall into one of some 60 different ancillary groups. Some ophthalmological technicians include the orthoptic technician, the optician, a contact lens technician or an ophthalmic assistant. These technical workers help the physician render medical care to more people than he could serve working alone.

Dispensing opticians are ancillary medical workers, who although acting on the orders of and responsible to the physician, are engaged in a technical service occupation as an independent business. The dispensing optician who does nothing more than fill the prescription of an ophthalmologist with regard to glasses should be identified from the refracting opticians who, since the turn of the century, have been known as optometrists. Physicians prescribe over 50 per cent of the eyeglasses in this country, and the dispensing optician will supply over half of the glasses prescribed by the physician. This makes it evident that the dispensing optician is an essential and important ophthalmological ancillary medical worker.

His continued existence and ability to function, however, are threatened by various actions and proposals originating with optometry. This has resulted from perversion of the laws regulating optometry either through interpretation or amendment. Laws adopted for the regulation of optometry have commonly defined optometry as the measurement of the powers of vision and of optical defects of the eye without the use of drugs and the adaptation of lenses and prisms to correct these defects. This describes the services of a refracting optician. No optometric law has described the practice of optometry as the supplying of glasses fabricated in accordance with the prescription of a physician, and yet attempts have been made in a number of states to subject the optician to the jurisdiction of boards of optometry by interpreting certain clauses to mean that the dispensing optician who mechanically fits glasses (frames) is practicing optometry. This is a perversion of the intent of the legislation which opticians understandably look upon as inequitable and which physicians can only regard as an unjustifiable interference with the functions of ancillary medical personnel. This interpretation of the law would require the optician to have an optometric license to carry on his business. This seems absurd since the optician exists to carry out the orders of the physician. Legislation of this sort will ultimately deprive the physician of the services of the optician by eliminating the optician from the scene.

Legislative or court action against the optician or any other ancillary medical workers such as this is actually and should be recognized as an attack on medicine. The medical profession cannot escape its moral obligation to protect the paramount public interest and to defend its own legal rights. If the optometric boards have jurisdiction over opticians, it may mean the regulation of an ancillary medical worker by a group which is in no way concerned with the furnishing of medical care, or in any way a party to the rendering of medical services. It is evident, therefore, that any legislation which affects the dispensing optician is a prime concern not only to the public, but to the medical profession. The physician can control the standards of eyeglasses and determine their acceptability by the process of inspection and acceptance. But he cannot supervise the optician if the latter is eliminated from the scene by legal procedure.

Licensure laws, if they are necessary, should clearly apply only to the dispensing optician operating an optical dispensing business and the dispensing opticians in his employ.

A.K.H.

ARIZONA MEDICAL ASSOCIATION MEDICAL PAPER AWARD

THE planning committee for the annual state medical meeting of the Arizona Medical Association to be held in April 1960, has announced that it will present an award for the best paper submitted for publication and presentation at the annual meeting. The paper to be written must be by a practicing physician in Arizona, or one serving on the house staff of one of the hospitals in this state. It is contemplated that all papers submitted will be reviewed and the majority published in *Arizona Medicine.* The paper deemed most superior by the program committee as to manner of presentation, thoroughness of review of subject material, and originality of content is to receive an award at the annual meeting and will be read by its author as a special part of the scientific program. Further details will be listed in future issues of the Journal.

REGISTRATION — 1959 ANNUAL MEETING

County Medical Sociey	Total Membership	No. of Members Registered	Per Cent of Members Registered
Apache	2	1	50
Cochise	26	3	12
Coconino	21	4	19
Gila	22	3	14
Graham	7	3	43
Greenlee	7	1	14
Maricopa	548	144	26
Mohave	2	1	50
Navajo	8	3	37
Pima	264	51	19
Pinal	29	14	48
Santa Cruz	8	0	0
Yavapai	21	7	34
Yuma	32	3	9

Non-members, including guest orators, VA, interns, residents, out-of-state doctors, etc. 63

Total Registration of Medical Doctors 301

(Editor's note — This is a poor representation at our annual meeting. Recommendations for improvement of the program and development of added interest in these sessions are invited.

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products	indications	ingredients	dosage
CITRA FORTE CAPSULES (New)	When a narcotic is indicated for colds	Cough Suppressant / Antihistamines / Decongestant / APC / Ascorbic Acid	2 capsules immediately, then 1 capsule every 3-4 hou
CITRA DEL CAPSULES (New)	Prolonged action cold treatment	Decongestant / Analgesic / Antipyretic / Antihistamines / Ascorbic Acid	2 capsules immediately, ther 1 capsule every 8 hours
CITRA NASAL SPRAY (New)	Relief of congestion in colds rhinitis, and sinusitis	Antihistamines / Antibiotic / Decongestant	Spray one time into each n and repeat after few minut

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apsules immediately, followed by 1 capsule every 8 hours.

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ne per teaspoon. ■ Multiple antihistamines and expectorant. ■ Prompt, economical cough therapy. ■ Tastes good.
 Dosage: 1 or 2 teaspoonsful every 3-4 hours.

products	indications	ingredients	dosage
ITRA FORTE SYRUP	For complete cough control	Cough suppressant / Antihistamines / Expectorant	1-2 teaspoonsful every 3-4 hours
ITRA CAPSULES	For relief of the common cold	Decongestant / Analgesic / Antipyretic / Antihistamines / Ascorbic acid	2 capsules immediately then 1 capsule every 3-4 hours
ITRA SYRUP	For less severe and children's coughs	Cough suppressant / Expectorant / Antihistamines / Decongestant / Ascorbic Acid	1-2 teaspoonsful every 3-4 hours
ITRA H.F.	Hay Fever	Broadspectrum Antihistamines / Vasodilator	2 capsules immediately then 1 capsule every 4 hours

LETTER TO THE EDITOR

William S. Clark, M. D.
Director of Medical Care
The National Foundation (For Everything)
800 Second Avenue
New York 17, N. Y.

DEAR Doctor Clark:

I have your letter of May 20, 1959 with the copy of the Broadened Chapter Patient Aid Program of the National Foundation. I am writing this letter to challenge your sentence in the second paragraph in your letter, in which you state, "I hope that you will agree that these new policies are medically and financially sound."

Doctor Clark, I do not agree that "these new policies are medically and financially sound." It is incomprehensible that such policies could have evolved from "conferences with medical advisory committee representatives." These so-called representatives betrayed the medical profession by putting no value on the physician's services. This, I will explain soon. The National Foundation should have polled the opinions of all of the doctors who afford medical and surgical care to the patients who suffer with poliomyelitis, virus diseases, arthritis, birth defects, etc. The Foundation should have asked these doctors if they are willing to offer their services without thought of expecting compensation.

To get to the point of my argument, I note on page 7 of the brochure, "The Broadened Chapter Patient Aid Program of the National Foundation" – "What are prohibited chapter expenditures?" And there, first in line, slapping me in the face, is "Medical and surgical fees." Again, the same prohibition of medical and surgical fees confronts me on pages 10 and 12.

You piously intone about the wonderful things the National Foundation is going to do for the unfortunate sufferers of the encyclopedic catalogue of diseases; and the Foundation accepts contributions from people who believe that "their doctor" will be compensated for his services if one of their family is stricken with any of these diseases. Dr. Clark, isn't the Foundation being extremely generous with my services and talents, as well as those of my colleagues? Or is it now considered old-fashioned for a doctor to expect to be paid a reasonable fee for his services?

Your Broadened Chapter Patient Aid Program has committed the National Foundation to *patient care,* as well as your admirable program for research, education, etc. But who is the most important person in the care of the patient? His doctor, of course! The program provides as permissible chapter expenditures hospitalization. Who admits, examines, writes histories, physical examinations, progress notes, does diagnostic spinal punctures, orders medications, x-rays, orders and interprets laboratory tests, and prescribes physical therapy and braces and splints? You can be damned sure it isn't one of your executive secretaries. If the services of the physicians have no value to the Foundation, then the Foundation should not deceive the contributing public into believing that the "broadened program" will provide medical and surgical care.

It is with some sadness and regret that I am impelled to submit my resignation as a member and chairman of the Medical-Advisory Committee of the Yuma County (Arizona) Chapter of the National Foundation. I have enjoyed my work and the warm association of the other volunteer workers for the past 15 or 20 years. I hope that they will continue their services to the sick; but I cannot continue my work with them because I have espoused a principle that a physician is an honorable man and that his services deserve some compensation.

In the third paragraph of your letter, you state that, "Your assistance will be needed in explaining to physicians and others the meaning and objectives of the new patient aid program." I cannot, with good conscience, face my colleagues and comply with your request.

This letter is written by a man who believes that he is sincere, and who has not become rich from fees extracted from the unfortunate sick. I am proud of my chosen profession and my ideals and will continue to defend my colleagues who share these ideals.

Sincerely yours,

A. I. PODOLSKY, M.D.

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*Peterman, R. A.: Clinical report cited with permission.

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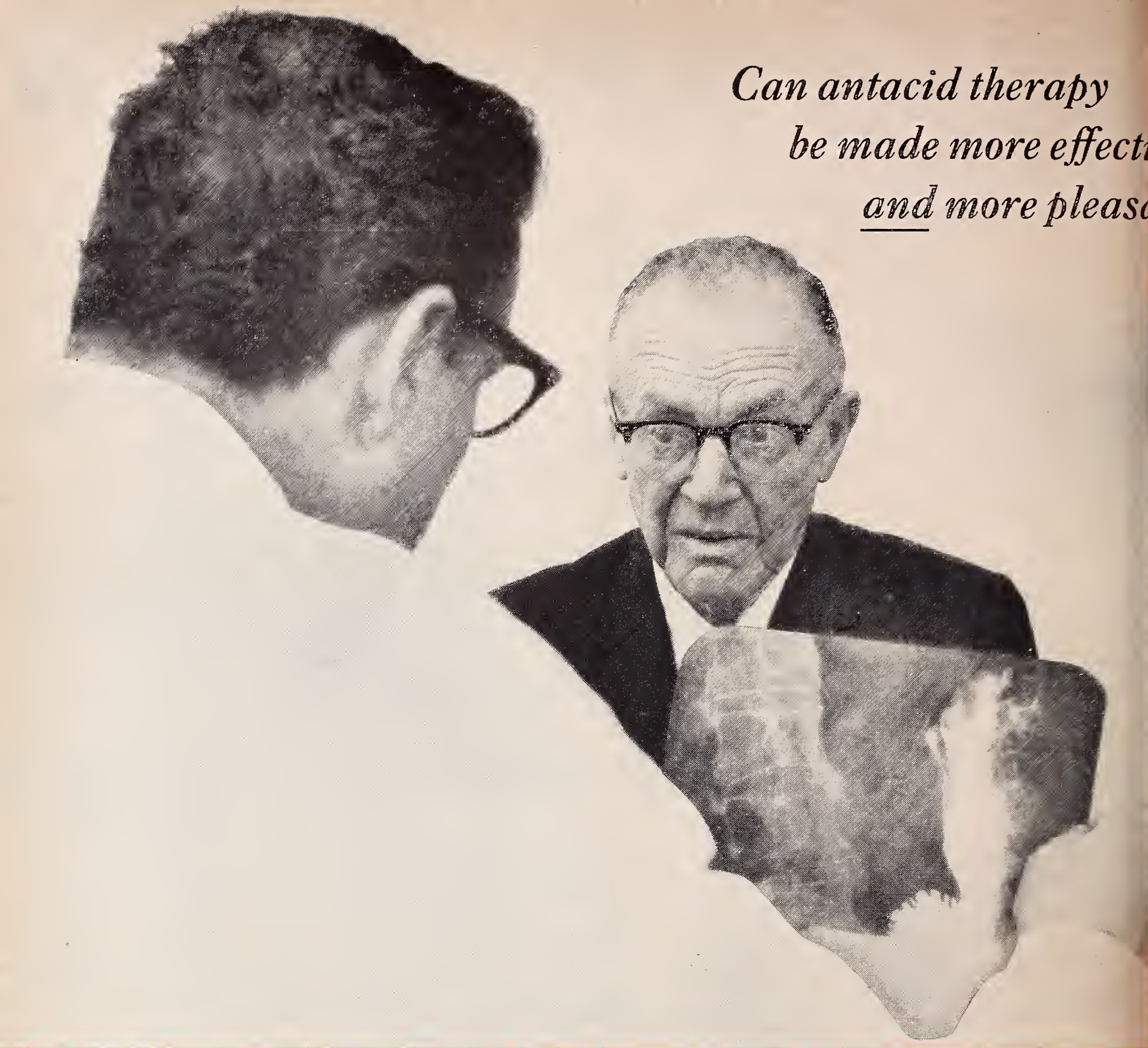

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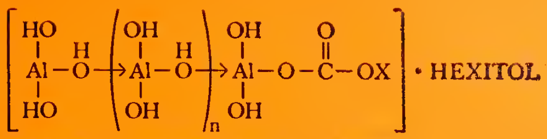

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n is at least 1 and averages less than 6. X is a cation.

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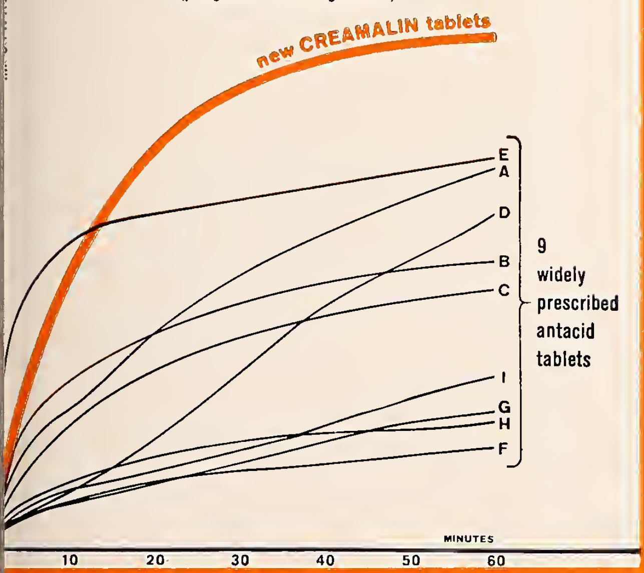

were powdered and suspended in distilled water in a constant temperature r (37°C) equipped with mechanical stirrer and pH electrodes. Hydrochloric s added as needed to maintain pH at 3.5. Volume of acid required was d at frequent intervals for one hour.

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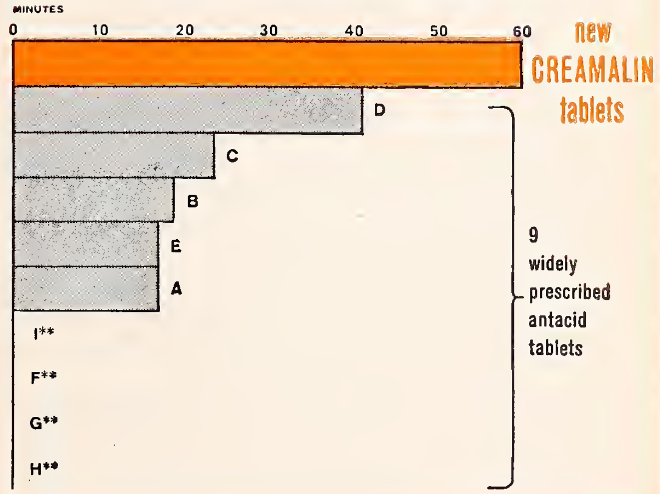

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*Hinkel, E. T., Jr., Fisher, and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.

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OBITUARY

DR. R. O. RAYMOND

R. O. Raymond, M.D.

DR. RAYMOND was born in Huey, Ill., on Sept. 5, 1876; he died in Phoenix, Ariz., on July 6, 1959. He received his degree in medicine from Washington University Medical Department in St. Louis, Mo., in 1899.

After several years practice in St. Louis, he moved to Arizona where he was licensed in 1904. He first located in Williams, and in 1906 moved to Flagstaff. He established the Milton Hospital, which was the first hospital in Flagstaff and was located in close proximity to the Arizona Lumber and Timber Company. For many years he had charge of the medical and surgical care of the mill employes there, and he also conducted an extensive practice in the community and the northern part of the state.

Dr. Raymond became interested in the cattle and sheep business, which was one of the mainstays of this region in Arizona. When his vision began to fail, he disposed of the hospital to his associates Drs. A. H. Schermann and M. G. Fronske, continuing only a limited private practice. His holdings in sheep and cattle were a most satisfying outlet for his energies as his handicap gradually impaired his ability to care for his medical practice.

In 1945 he sold his sheep holdings and established a winter home in Phoenix to escape the rigors of the Flagstaff winter climate. His winter home, surrounded by a moderate acreage of citrus, was again an outlet for his thought and energies as well as a proving ground for many original ideas about plant and tree growing. To his many friends he was ever the gracious host, and during the winter months which he spent in Phoenix, he was always glad to have them come for a visit. On these occasions he was most liberal in supplying them with an abundance of fruit and dates from the orchard.

Dr. Raymond never married. He is survived by an older sister and several nieces and a nephew.

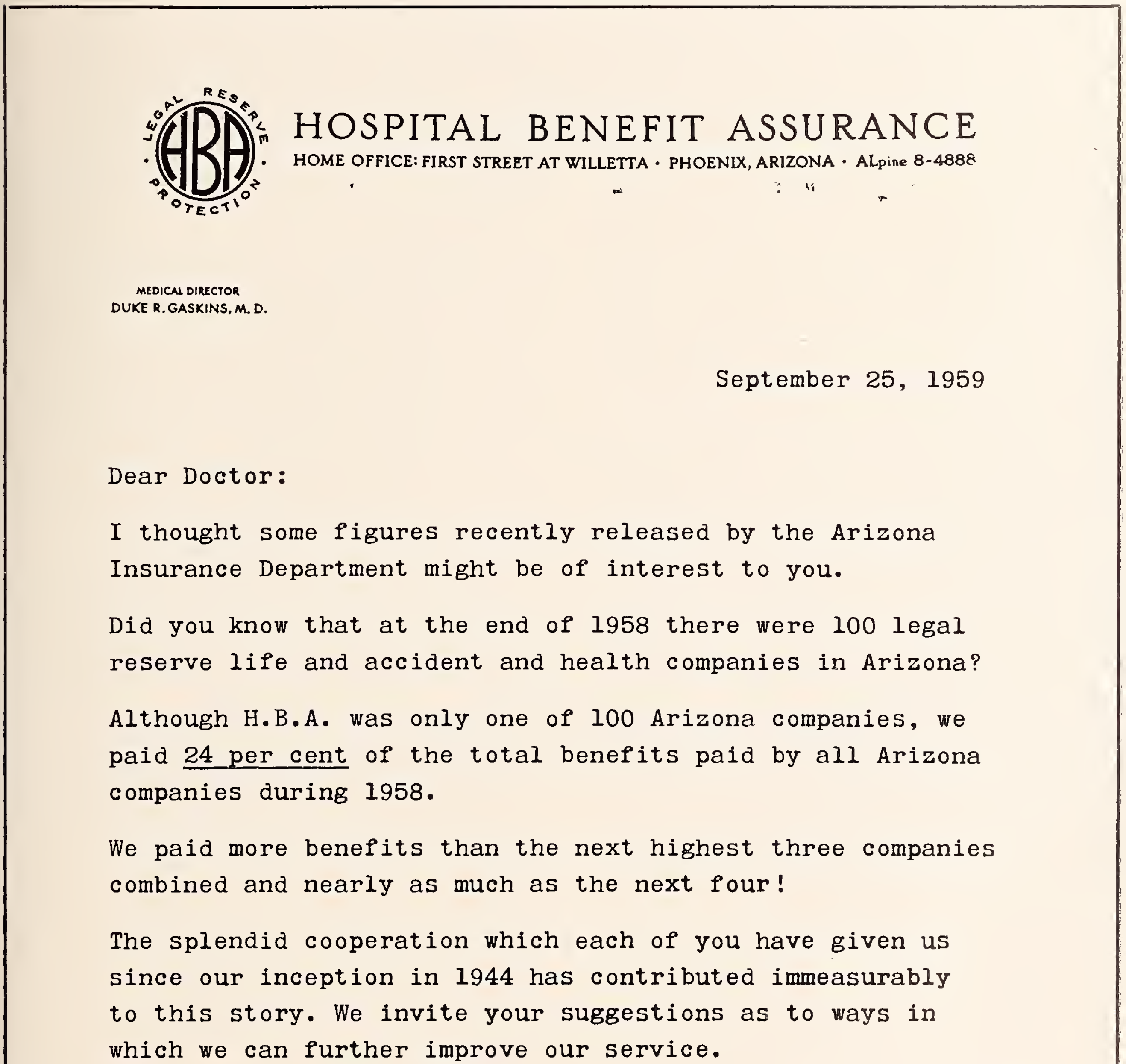
During his active practice, Dr. Raymond made frequent visits to the Mayo Clinic and many other medical centers east and west to keep abreast of the advances in surgery and medicine. He had a keen mind with a searching tendency for new ideas and methods in the fields of medicine and agriculture. An avid reader, he was constantly consulting the book reviews in the Journal of the AMA. His interest in medical matters never failed. Although unable to read, he subscribed to medical journals and had them read to him by readers or his friends, as well as by means of long playing records. The same was the case with new medical books which he chose from the book reviews. All his life he kept buying books for himself and presenting many to his younger physician friends.

Dr. Raymond's interest in animal and plant life is evidenced in many ways. As we drive along the Oak Creek road from Flagstaff we see large stretches of wild yellow clover which he spread with his own hands as he roamed over the country. He was an expert in feed grasses and although his vision was impaired, he would identify them by touch of stem, leaf, or root. He presented to the state a large tract of land between Flagstaff and Winslow for a buffalo and antelope reserve. A beautiful wooded spot about seven miles out on the Oak Creek road with a cool spring called Lindberg Spring was also a gift to the state for the pleasure of picnickers and campers.

Year after year, Dr. Raymond was the unknown benefactor of many a needy family. He not only financed many cases for special medical care, but also gave aid to other types of distress cases. He contributed to many civic welfare activities and churches, again almost invariably anonymously. The present hospital site in Flagstaff was made possible through his efforts.

Dr. Raymond was always devoted to his patients and spared no effort to give them every care and consideration possible. He was beloved by his patients and by his colleagues in the medical field, and will ever be remembered as a good doctor and a good friend.

M. G. FRONSKE, M. D.



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MEDICAL DIRECTOR
DUKE R. GASKINS, M. D.

September 25, 1959

Dear Doctor:

I thought some figures recently released by the Arizona Insurance Department might be of interest to you.

Did you know that at the end of 1958 there were 100 legal reserve life and accident and health companies in Arizona?

Although H.B.A. was only one of 100 Arizona companies, we paid 24 per cent of the total benefits paid by all Arizona companies during 1958.

We paid more benefits than the next highest three companies combined and nearly as much as the next four!

The splendid cooperation which each of you have given us since our inception in 1944 has contributed immeasurably to this story. We invite your suggestions as to ways in which we can further improve our service.

Very truly yours,

Duke R Gaskins MD

Duke R. Gaskins, M.D.
Medical Director

DRG:ld

Topics of Current Medical Interest

ARIZONA POISONING CONTROL INFORMATION CENTER

PHOSPHATE ESTER INSECTICIDE POISONING

A SEVERE case of poisoning from an organic phosphate ester insecticide was recently reported to the Arizona Poisoning Control Information Center(1). This poisoning incident involved a 43-year-old white farm worker who was treated at an Arizona Hospital Poisoning Control Treatment Center. When admitted to the hospital, the poisoning victim was found to be acutely ill and displayed the following symptoms: Extreme miosis, salivation, dyspnea, profuse diaphoresis, abdominal cramping, and extreme muscular pain in the arms and legs. He showed typical signs of pulmonary edema with coarse bubbly ráles in his chest. He rapidly became unconscious. His blood pressure rose to 200/110 mm. Hg. Subsequent laboratory tests revealed a marked depression of red blood cell cholinesterase activity. It was also noted that the hospital room in which he was confined developed a heavy, unpleasant, sulfur-like odor that resembled that of the common garden insecticide, malathion.

It was learned subsequently that this farm worker had been heavily exposed to the phosphate ester insecticide, thimet, for two weeks prior to development of the above symptoms. The victim had been engaged in replanting cotton in which cotton seed impregnated with thimet was used. Apparently, the worker exercised no precautions with regard to handling the material. The patient's wife stated that the man would come home after a day's work in the field with his trouser legs and other parts of his clothing saturated with the malodorous insecticide. The patient would usually use the same soiled clothing for the next day. The powder from the seeds would also come in contact with exposed parts of his body and legs.

Initial treatment consisted of the intramuscular administration of atropine sulfate. However, his condition became progressively worse and respiration ceased. Artificial respiration by means of a Bennett valve and cyclic manual respiration was employed. Intensive administration of atropine sulfate was carried out. Two milligrams of atropine sulfate was administered intravenously every 15 minutes. In addition to atropinization, the patient was digitalized with intravenous lanatoside C (Cedilanid) and the corticosteroid, hydrocortisone (Solu-Cortef), was also administered intravenously. Within two hours, the patient regained spontaneous respiratory movements, the pupils had dilated slightly and the profuse diaphoresis had diminished. After six hours of continued atropinization (a total of 48 mgs. of atropine sulfate intravenously), the patient regained consciousness, the pupils were dilated and there was noticeably less pulmonary congestion. Subsequent treatment consisted of intravenous atropine sulfate, 2 mg. every four hours for an additional 12 hours, and frequent bathing of the skin with copious amounts of soap and water until the odor of the insecticide from the body surface was no longer apparent. After 12 hours, the acute effects of the intoxication were minimal, and the patient was apparently well on the road to recovery.

The organic phosphate ester insecticides, such as thimet, are extremely potent, useful insecticides that have resulted from research on war gases—in particular, those known as "nerve gases." In addition to the compound thimet, other insecticides of this class include: Parathion, methyl parathion, diazinon,, demeton (systox), TEPP, dipterex, and malathion. These compounds inhibit cholinesterase enzymes throughout the body, resulting in local accumulation of acetylcholine, which produces increased activity of smooth muscle and secretory glands (manifested by nausea, vomiting, diarrhea, miosis, sweating, and increased salivary and bronchial secretion), bradycardia, central nervous system symptoms, and muscular fasciculations and weakness.(2) The organic phosphate esters are absorbed through the skin, respiratory tract, conjunctivae, and the gastrointestinal tract. It has been shown that in agricultural use, absorption through the intact skin is the most frequent route of exposure.(3) By far the greatest number of cases of poisoning from these insecticides occur among unsupervised individuals engaged in some phase of insecticide application.

The medical aspects of poisoning by the insecticidal phosphate esters consist of prevention, detection, and treatment. Prevention of poisoning can be accomplished by education of those occupationally exposed to the compounds regarding the dangers of skin contamination, inhalation, and ingestion. The use of protective clothing and immediate washing of contaminated skin should be advised. Clothing should be changed and thoroughly washed after each exposure.

Detection of phosphate ester poisoning can be accomplished through recognition of the characteristic symptoms of acetylcholine poisoning. Exposure to amounts of phosphate esters which are too low to produce symptoms can be detected by periodic blood cholinesterase measurements, because marked depression of cholinesterase activity of the blood occurs before symptoms are evident. It is thus possible to terminate the exposure or to institute the proper protective measures before poisoning occurs.(3)

It was clearly demonstrated in the above case history that prompt and sustained atropinization is the essence of successful treatment of anticholinesterase intoxication. Atropine, preferably administered intravenously and in quantities much greater than are normally employed, is essential. There appears to be in the minds of some physicians an exaggerated fear of the toxicity of atropine.(3) It has been shown that one of the characteristics of phosphate ester poisoning is an increased tolerance to atropine.(4) Grob and Harvey(4) state, "Overatropinization may be incapacitating but presents little danger to life." Overatropinization is recognized by the development of very dry mouth, thirst, hoarseness, dry, flushed skin, dilated pupils, blurring of near vision, tachycardia (up to 140 per minute), urinary retention, restlessness, disorientation, maniacal behavior, and increased drowsiness.(4)

Although atropine has been of great benefit in saving the victims of acute poisoning by phosphate esters, its effectiveness is limited to an ability to counteract about two or three lethal doses.(5) Thus, attempts to prevent poisoning should be continued through education of those who are occupationally exposed concerning the dangers associated with careless handling and misuse of these chemical agents.

STATISTICS OF 86 POISONING CASES IN ARIZONA DURING JULY 1959

AGE:	*Per cent*	*Number*
Under 5 years	58.1	(50)
6 to 15 years	7.0	(6)
16 to 30 years	11.6	(10)
31 to 45 years	10.5	(9)
Over 45 years	9.3	(8)
Not reported	3.5	(3)
NATURE OF INCIDENT:		
Accidental	72.6	(71)
Intentional	27.4	(15)
TIME OF DAY:		
Between 6 a.m. and noon	27.9	(24)
Between noon and 6 p.m.	25.6	(22)
Between 6 p.m. and midnight	20.9	(18)
Between midnight and 6 a.m.	9.3	(8)
Not reported	16.3	(14)
OUTCOME:		
Recovery	98.8	(85)
Fatal	1.2	(1)

CAUSATIVE AGENTS:		
Internal Medicines	*Number*	*Per cent*
Aspirin	23	26.7
Other analgesics	2	2.3
Barbiturates	7	8.1
Antihistamines	3	3.5
Laxatives	1	1.2
Cough medicine	0	0.0
Tranquilizers	1	1.2
Others	7	8.1
Subtotal	44	51.2
External Medicines		
Liniment	0	0.0
Antiseptics	1	1.2
Others	0	0.0
Subtotal	1	1.2
Household Preparations		
Soaps, detergents, etc.	1	1.2
Disinfectants	3	3.5
Bleach	1	1.2
Lye, corrosives, drain cleaners	3	3.5
Furniture and floor polish	0	0.0
Subtotal	8	9.4

REFERENCES

1. Grateful acknowledgment is made to George W. King, M.D., of Tucson, Ariz., for information presented in this report.
2. Grob, D. and Johns, R. J., "Treatment of Anticholinesterase Intoxication with Oximes," JAMA, 166:1855, 1958.
3. Hamlin, D. O. and Golz, H. H., "Parathion Poisoning — A Brief Review," Ind. Med. and Surg., 24:65, 1955.
4. Grob, D. and Harvey, A. M., "The Effects and Treatment of Nerve Gas Poisoning." Am. J. Med., 14:52, 1953.
5. DuBois, K. P., "Organic-Phosphate Insecticides," Modern Medicine, 25:18 (Dec. 10, 1957).

	Number	Per cent
Petroleum Distillates		
Kerosene	1	1.2
Gasoline	1	1.2
Others	2	2.3
Subtotal	4	4.7
Cosmetics		
Pesticides		
Insecticides	4	4.6
Rodenticides	0	0.0
Others	2	2.3
Subtotal	6	6.9
Paints, Varnishes, Solvents, etc.	4	4.6
Plants	4	4.6
Miscellaneous (11 cases of food poisoning)	14	16.3
Unspecified	1	1.2
Total	86	100.0

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OSTEOPATHY

Resolution No. 10

INTRODUCED by Doctor Wendell C. Stover of Indiana in the House of Delegates of the American Medical Association in meeting (clinical session) held in Minneapolis, Minn., Dec. 2-4, 1958:

> Whereas, Problems in the relationship between medicine and osteopathy exist in most states; and
>
> Whereas, These problems differ in the various states and require solution at the state level; therefore be it
>
> Resolved, That the House of Delegates of the American Medical Association recognizes that the constituent state and territorial associations have the right to establish the relationship of the medical profession to the osteopathic profession within their respective states.

Report of the reference committee on medical education and hospitals to the house of delegates: Recommends that Resolution No. 10 be disapproved, but that the judicial council be requested to review the past pronouncements of the house of delegates with respect to osteopathy and the status of the laws of the various states in this regard. It was requested that the judicial council, if possible, present its report and recommendations at the next meeting of the house of delegates. *Adopted.*

* * * * * * *

Special report of the judicial council to the members of the House of Delegates of the American Medical Association in annual meeting held in Atlantic City, N. J., June 8-12, 1959:

> "In compliance with Resolution No. 10 adopted by the house of delegates at its session in Minneapolis in December 1958, the judicial council reviewed the past pronouncements of the house of delegates and the laws of the several states in regard to osteopathy. Inquiry was directed to the executive officer of the constituent associations, the secretary of the state boards of medical examiners and the secretary of state boards of health. Each was asked to advise regarding the knowledge he had concerning osteopathic practice in his own community. Informal interviews were conducted at random to obtain first-hand expressions of opinion concerning the 'osteopathic question.'
>
> "The council would be remiss if it did not express its appreciation to all who co-operated in its study of this question.
>
> "In brief, the judicial council believes the following is an adequate summary of its findings:
>
> "1. The Principles of Medical Ethics since 1847 have, in substance, expressed the concept that it is unethical for doctors of medicine, members of this association, voluntarily to associate professionally with one who in his practice follows a system of healing 'based on the authority of its promulgator to the exclusion of demonstration and scientific experience.'

"2. Osteopathy was founded as a system of healing in 1894. It was based on the tenents of Andrew T. Still, in opposition to the standard of medical practice as it existed between 1874 and 1894. The tenets, which Still promulgated, on his own authority, and substituted for the existing state of medical science, have not been proved by scientific demonstration and experience.

"3. There appears to have been periods of transition in the history of osteopathy. They may be said to be 1894-1936, and 1936 to the present. In the latter period the curricula and training of the osteopathic colleges were modeled after those of the medical schools. Organized osteopathy began to emphasize that its profession should be termed 'osteopathic medicine' instead of 'osteopathy.' More recently it began to identify its teaching institutions as medical schools conducted under osteopathic auspices.

"4. During this period of transition, more and more osteopaths have obtained the legal right to practice the healing art without limitation. Presently there are in excess of 12,200 licensed osteopaths of whom 9,274 are licensed to practice or do practice a system of healing without limitation.

"Osteopaths are *not* licensed to practice an unrestricted system of healing in the following states: Alabama, Arkansas, Georgia, Idaho, Louisiana, Maryland, Minnesota, Mississippi, Montana, North Carolina, North Dakota, South Carolina.

"In Alaska no legal provision is made for licensing osteopaths.

"In the remaining states, osteopaths may either obtain a license to practice the healing art without limitation, or they do practice without limitation by virtue of the license they are granted. Statutes defining osteopathy or limiting its scope are ambiguous in several of these states, as for example in Iowa, Maine, Nevada, Oregon, Rhode Island and Tennessee. In Nebraska osteopaths could and some did take successfully the medical board between 1943 and 1948 but since then have been licensed only to practice a limited system of healing.

"Under federal laws and regulations, osteopaths have almost identical status with doctors of medicine.

"5. There are six colleges of osteopathy. No evidence has been brought to the council's attention which would indicate that teaching in these schools is of a quality or quantity less than described in the report of the committee for the study of relations between osteopathy and medicine. (Atlantic City meeting, June 1955, house of delegates.)

"6. The constitution of the American Osteopathic Association was amended in July 1958, at the annual meeting of that association. Prior to that time that document in its statement of 'objects' provided:

> 'The objects of this association shall be to promote the public health and the art and science of the osteopathic school of practice of the healing art;
>
> 'By maintaining high standards of osteopathic education and by advancing the profession's knowledge of surgery, obstetrics, and the prevention, diagnosis and treatment of disease in general;
>
> 'By stimulating original research and investigation; and by collecting and disseminating the results of such work for the education and improvement of the profession and the ultimate benefit of humanity;
>
> 'That the evolution of the osteopathic principles shall be an ever-growing tribute to Andrew Taylor Still, whose original researches made possible osteopathy as a science.'

"At its July 1958, meeting the American Osteopathic Association amended its constitution by deleting the above statement. Now the 'object' article of the constitution reads, in full, as follows:

> 'The objects of this association shall be to promote the public health, to incorporate scientific research and to maintain and improve high standards of medical education in osteopathic colleges.'

Recommendations

"There can be no doubt that osteopathy, as originally conceived, did constitute a practice of the healing art based on the authority of its promulgator to the exclusion of demonstrated scientific experience. Prior to the recent period mentioned above, all osteopaths, who adhered to the tenets of the founder of osteopathy, unquestionably practiced medical cultism. Even today those who adhere to such medical dogmas must be classified as cultists and voluntary professional association with osteopathic practitioners of this type is unethical. There can be no deviation from the basic principle that it is unethical for members of the American Medical Association, to voluntarily associate professionally with those who in their professional activities practice a method of healing which is not based on approved scientific principles.

"The question, however, which is now posed does not concern the validity of this principle, but rather its application. Up to the present time this principle has been applied to all osteopaths. Should this application of the principle be continued? Should all osteopaths be regarded as cultists, or is it possible that some should not be so classified?

"Based on information obtained from the authentic sources which have been mentioned, the judicial council believes that many practitioners of osteopathic medicine now conduct their professional activities according to scientific principles. In a majority of the states, osteopaths may legally practice the healing art to the same extent as doctors of medicine. Therefore, the judicial council believes there is a reasonable doubt that the original interpretation of Section 3 of the Principles of Medical Ethics should be applied to the relationships between doctors of medicine and *all* practitioners of osteopathic medicine.

"It would seem that the American medical profession may now have an obligation in the interest of the welfare of patients to acknowledge the propriety of voluntary professional association between doctors of medicine and practitioners of osteopathic medicine who (a) may lawfully practice without limitation and, (b) subscribe to those scientific principles which guide members of the American Medical Association.

"The Council therefore recommends that:

"(1) The principle be reaffirmed that all voluntary professional association between doctors of medicine and those who do not practice a system of healing based on scientific principles is unethical.

"(2) It shall not be considered contrary to the Principles of Medical Ethics for members of the American Medical Association voluntarily to associate professionally with physicians, other than doctors of medicine, who are licensed to practice the healing art without limitation and who base their practice on the same scientific principles as those adhered to by members of the American Medical Association, and that

"(3) It shall not be considered contrary to the Principles of Medical Ethics for members of the American Medical Association to teach students of osteopathic medicine who seek to develop and improve their knowledge of the science of medicine and thereby to improve their ability to provide a better quality of medical care."

Report of the reference committee on amendments to the constitution and by-laws of the house of delegates:

1. Your reference committee is deeply impressed with the work done by the judicial council in preparing its report and recommendations to the house of delegates on this important subject. It is noted that the council reviewed the previous policy statements of the house and the status of the laws of the several states. In addition, the council wrote to the executive officer of each constituent medical association, the secretary of each state board of medical examiners, and conducted numerous interviews. The information received from these sources, in the opinion of your committee, constitutes authentic data.

2. Your committee was also impressed by the reasonable and serious discussion of the osteopathic question by those who attended the hearing. It is the belief of your reference committee that the discussion can be divided into three categories: (1) approval of the judicial council's recommendations as printed in the handbook (recited above); (2) disapproval of those recommendations; and (3) suggested modification of the council's recommendations.

Two topics appeared most often during the discussion; (a) the general quality of medical care received by the population at large and, (b) the effect which a change in basic American Medical Association policy might have in those states where osteopaths are not now accorded unlimited practice privileges. In this connection, your reference committee points out that in 12 states, osteopaths may not practice without restriction, that in Alaska no provision is made for the licensure of osteopaths, and that in the remaining 36 states, osteopaths either lawfully practice without limitation by virtue of the license they hold, or practice without limitation because of local interpretation or enforcement policies.

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[1] Based on estimate by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122 (Jan.) 1933

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3. Your reference committee believes that it expresses the sentiments of those who appeared before it by saying that the medical profession is justified in objecting to various cults, not because of their system of practice, but because of the serious lack of education of their members and the fact that they are seeking the right to practice as doctors of medicine without meeting the same educational standards.

If such practitioners wish to act as physicians and surgeons and to assume all the resultant responsibilities, then they should not object to being measured by the same standards and submitting to the same tests as do doctors of medicine.

Your reference committee believes that in each state there should be established one educational standard in the field of medicine and surgery, administered by a single licensing board by which everyone who is authorized to practice medicine and surgery should be required to prove he has secured satisfactory training in the fundamentals of medical science. Osteopathic colleges, and indeed all colleges teaching medicine and surgery or any of its branches, should be inspected and classified according to the same standards of measurements now being applied in medical schools and by the same boards which aprove medical schools. We believe that no one should be granted the privilege of practicing medicine in any state until he proves to the satisfaction of the licensing board, that he has graduated from a professional school approved by that board, and until he has passed the same examination that doctors of medicine must pass.

4. Your reference committee believes the American Osteopathic Association should be commended for amending its constitution so as to emphasize scientific objectives and high standards of medical education. Your reference committee further believes that it can be accepted as the opinion of those who appeared before it that the organized osteopathic profession can further demonstrate its good faith and can implement the change in its constitution by joining with doctors of medicine to improve the structure of medical practice acts as suggested above.

5. Your reference committee believes that, instead of accepting the recommendations of the judical council as printed in the handbook, the following should be established as the policy of this association in regard to the relations between doctors of medicine and osteopaths (as amended):

(a) All voluntary professional associations between doctors of medicine and those who practice a system of healing not based on scientific principles are unethical.

(b) Enactment of medical practice acts, requiring all who practice as physicians and surgeons to meet the same qualifications, take the same examinations and graduate from schools approved by the same agency should be encouraged by the constituent associations.

(c) It shall not be considered contrary to the principles of medical ethics for doctors of medicine to teach students in an osteopathic college which is in process of being converted into an approved medical school under the supervision of the Council on Medical Education and Hospitals of the American Medical Association.

(d) That a liaison committee be appointed by the board of trustees of the American Medical Association to meet with representatives of the American Osteopathic Association, if mutually agreeable, to consider problems of common concern including inter-professional relationships on a national level. *Adopted.*

JESSE D. HAMER, M.D.,
Arizona Delegate to AMA

HELP FOR FAMILY OF CANCER PATIENT

A NEW pamphlet designed to assist the families of cancer patients meet the difficult physical and psychological problems connected with that disease has been issued by the public affairs committee in co-operation with the American Cancer Society.

Written by Elizabeth Ogg with the assistance of several medical groups specializing in cancer research and treatment, the pamphlet suggests ways of "handling the situation created by your relative's cancer with a minimum of mental suffering." It also contains specific advice on preparing for surgery and rehabilitation after surgery. The latest of the non-profit Public Affairs Pamphlet series, it is available for 25 cents from the committee's office at 22 East 38th St., New York, N. Y.

THE ARIZONA MEDICAL ASSOCIATION, INC., RESOLUTIONS 1959 MEETING

JOINT ACCREDITATION OF HOSPITALS

THE House of Delegates of The Arizona Medical Association, Inc., in annual meeting, May 2, 1959, adopted the following resolution introduced by Doctor Preston T. Brown of Phoenix:

"*WHEREAS*, the program of joint accreditation of hospitals by the joint commission, in which the American Medical Association participates, has made excellent progress, and

"*WHEREAS*, the principles of the program have been well established, but

"*WHEREAS*, the centralization of authority without appeal has led to the establishment of bureaucratic dogmatism, resulting in unrealistic rules and regulations having little relationship to varying local conditions, and

"*WHEREAS*, the channels of communication regarding professional standards have broken down, in that rules and regulations pertaining to professional matters are transmitted through and interpreted by lay persons to the confusion and inconvenience of the medical profession, now therefore

"*BE IT RESOLVED* by the House of Delegates of The Arizona Medical Association, Inc., that the program of joint accreditation of hospitals should be amended by:

1. Providing that the rules and regulations of the joint commission, insofar as they pertain to professional standards, including medical records, shall be effective only when approved by the governing body of the state medical associations or by a body constituted by the governing body for this purpose on a state level.
2. Providing that accreditation will be awarded or withdrawn only with approval of governing body of the state medical associations or such other body as may be designated as above described.
3. Providing that inspectors shall report to representatives of the governing body of the state medical association upon beginning and completing an inspection of an area under the jurisdiction of such medical association.
4. Providing that reports of inspections and recommendations be transmitted to the governing body of the state medical association or the body designated by it to act for it, and that distribution be the responsibility of the governing body of the state medical association, all communications being directed to the medical doctor designated as chief or president of each hospital staff, as well as to the lay hospital administrator.
5. Providing further that no recommendations or reports shall be effective unless favorably endorsed by the governing body of the state medical association.

BE IT FURTHER RESOLVED that the delegate of the Arizona Medical Association to the American Medical Association be instructed to present this resolution and seek its implementation, and

BE IT FURTHER RESOLVED that the cooperation of the American College of Surgeons, the Academy of General Practice and other interested organizations within the medical profession be sought to effect this reform."

As directed, this resolution was introduced in the house of delegates of the American Medical Association in meeting held in Atlantic City, N. J. June 8-12, 1959, and numbered 7.

The reference committee on medical education and hospitals of the AMA reported that it agrees with the statement contained in Resolution No. 7 that the program of accreditation of the Joint Commission on Accreditation of Hospitals has made excellent progress but calls attention to the "Report of the Committee to Review the Functions of the Joint Commission on Accreditation of Hospitals" (Wendell C. Stover, chairman – see JAMA, Sept. 29, 1956, Pp. 490-500) which was adopted by the house of delegates in June 1956. The reference committee urged further implementation of the recommendations contained in that report and that the representatives of the American Medical Association who serve as commissioners of the joint commission be urged to expedite the implementation of this report. The reference committee believes that the house of delegates, in adopting the committee report referred to above, has already acted with reference to the problem set forth in Resolution No. 7. It therefore recommends that Resolution No. 7 not be approved.

The house determined that no action be taken (on Resolution No. 7 at this time).

JESSE D. HAMER, M.D.,
Arizona Delegate to AMA

SOCIALIZED MEDICINE

THE House of Delegates of The Arizona Medical Association, Inc., in annual meeting, May 2, 1959, adopted the following resolution introduced by Doctor W. Shaw McDaniel of Phoenix:

"*WHEREAS,* there are in this country many groups dedicated to furthering many types of socialistic principles and sponsored by the government of the United States, and

"*WHEREAS,* among the principal objectives of the socialistic planners has been and continues to be in this and all other countries the ultimate complete socialization of the medical profession as one of the two major steps in furtherance of the extension of the welfare state, and

"*WHEREAS,* in every nation where socialized medicine has been established for the people, the cost of the program has tended to bankrupt the economy while at the same time the quality of medical care, as a whole, has deteriorated, and

"WHEREAS, there are in existence several government programs for care of various groups such as dependents of military personnel, and certain aspects of the veterans' program, and these programs are becoming increasingly and unbearably costly and are covering a greater segment of the population than was originally intended by congress, and

"*WHEREAS,* there is no demonstrable need for changing the character of medical service in this country, especially in view of the rapid expansion of private insurance coverage for the health needs of the people, and

"*WHEREAS,* the principle of free enterprise in this country since its founding has produced the most powerful and advanced nation in the history of the world, and

"*WHEREAS,* the private practice, as one of the cornerstones of free enterprise, has produced the highest standards of medical practice, the greatest increase in longevity, and the greatest improvement in the general health of the people.

"*THEREFORE BE IT RESOLVED,* that The Arizona Medical Association, Inc., shall adopt the principle of non-participation in any scheme of socialization of the medical profession under whatever name or guise, and shall not enter into any new contracts with the federal government or any agency thereof; which would further the advent of such government intervention between the doctor and the patient.

"*AND LET IT BE FURTHER RESOLVED,* that the above principle of non-participation will not in any way endanger or change the traditional obligation of the doctors of the association to care for anyone in need of medical attention under the time-tested and proved methods for distribution of medical services known as the private practice of medicine.

"*AND LET IT BE FURTHER RESOLVED,* that this resolution shall be forwarded to the executive vice president of the American Medical Association for introduction into the American Medical Association house of delegates at their annual meeting in June 1959."

As directed, this resolution was introduced in the house of delegates of the American Medical Association in meeting held in Atlantic City, N. J., June 8-12, 1959, and numbered 6.

The reference committee on insurance and medical services of the AMA, after careful consideration of Resolution No. 6 on socialized medicine — Its Avoidance Through Non-Participation in Government Medical Contracts, offered the following substitute:

"*WHEREAS,* The American Medical Association has been in the past and continues to be completely opposed to all forms of socialism and socialized medicine; therefore be it

"*RESOLVED,* That every government program which has implications of or might lead to socialized medicine should be scrutinized with great care before the profession enters into any such program." *Adopted.*

JESSE D. HAMER, M.D.,
Arizona Delegate to AMA

SCIENTIFIC ASSEMBLY COMMITTEE

69th Annual Meeting — 1960:

DOCTOR BEATON called the meeting to order reporting that the house of delegates of the association in meeting held May 2, 1959, expressed the wish that the 69th annual meeting of the association be held in the Phoenix area with due consideration of adequate refrigeration.

The board of directors in meeting held June

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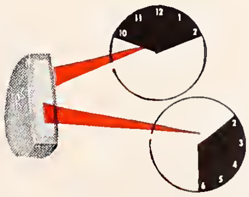

first — the outer layer dissolves within minutes to produce 3 to 4 hours of relief

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Each TRIAMINIC Tablet provides:

Phenylpropanolamine HCl	50 mg.
Pheniramine maleate	25 mg.
Pyrilamine maleate	25 mg.

One-half of this formula is in the outer layer, the other half is in the core.

Dosage: One tablet in the morning, mid-afternoon and at bedtime.

References: 1. Lhotka, F. M.: Illinois M. J. 112: 259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

TRIAMINIC JUVELETS: Each timed-release Juvelet is equivalent in formula and dosage to one-half of a TRIAMINIC tablet, for the adult or child who requires only half strength dosage.

TRIAMINIC SYRUP is recommended for adults and children who prefer liquid medication. Each 5 ml. tsp. is equivalent to ¼ of a Triaminic Tablet. *Adults:* 2 tsp. 3-4 times a day; *children 6-12:* 1 tsp. 3-4 times a day; *children under 6:* in proportion.

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21, 1959, determined that the dates of the annual meeting be Wednesday through Saturday, May 4 through 7, 1960.

Reviewing a number of available sites in the Phoenix area, the board of directors further expressed the desire to hold the meeting in Scottsdale with headquarters at the Safari Hotel. Following due deliberation and evaluation of all factors, the committee approved of the location and facilities to be made available.

Specific events were then determined upon as follows:

May 4, 1960
- (Wednesday morning) Board of directors — annual meeting
- (Wednesday afternoon) House of delegates — first session
- (Wednesday evening) Reception and buffet supper

May 5, 1960
- (Thursday morning) Scientific sessions
- (Thursday afternoon) Blue Shield corporate meeting
- (Thursday evening) Specialty group dinner meetings

May 6, 1960
- (Friday morning) Scientific sessions
- (Friday afternoon) House of delegates — second session
- (Friday evening) Reception and President's Dinner-Dance

May 7, 1960
- (Saturday morning) Scientific sessions
- Saturday afternoon) Golf tournament

Scientific Sessions:

It was tentatively determined that the scientific sessions would be held Thursday, Friday and Saturday mornings; that on Thursday and Friday mornings, from 8 to 9:30 o'clock, possibly the sessions to be preceded by a breakfast and seminar on "Whiplash" and "Hypnosis," respectively; and on Saturday morning the session could commence at about 9 a.m. All scientific sessions would terminate at about 12 noon or 12:30 p.m.

Golf Tournament:

Doctors C. Thomas Read, chairman, and Warren A. Colton Jr., both of Phoenix, and Edgar R. Updegraff of Tucson were appointed to serve as the golf tournament committee. It is to be suggested to Doctor Read that it might be desirable to arrange for a dinner Saturday evening, May 7, 1960, following the tournament in the afternoon, to be financed either by themselves or sponsored by a pharmaceutical company. The usual $100 will be contributed by the association for golf prizes to be augmented by any other gifts obtained by the committee.

Fees:

The board of directors on June 21, 1959, determined that the registration fee shall continue at $10 and the exhibitor fee at $150. It is understood that all registrants will be required to pay the established fee, including VA doctors, but excepting interns, residents and those in military service. Effort shall be made to contact the various hospitals in the state and invite those exempted to be present and participate in the scientific sessions.

Exhibits:

It was finally concluded that we will require utilization of a tent to house the exhibits, both scientific and technical, and that every effort be made to produce a show with a "Western" flavor and consider ways and means, including possibly registration prizes, to revitalize and improve attendance.

Scientific Sessions:

Doctor Beaton reviewed in detail the results of a survey undertaken and completed in an effort to ascertain the wishes of the membership to the end that the annual meetings will become more attractive and increase the registration. Some of the results revealed: (a) a majority is in favor of the resort type hotel, rather than the usual commercial hotel, as a site for the meeting; (b) about one-third desired longer scientific sessions, one-third shorter and one-third expressed no change desirable; (c) shorter papers were expressed most desirable; (d) a heavy predominance favored (1) more panel-type discussions, (2) more presentations of particular interest in everyday clinical practice, and (3) more stress placed on scientific sessions; (e) no particular stress on social or cultural activities; and (f) a heavy vote against athletic and sporting activities.

The Thursday, Friday and Saturday morning scientific sessions were thoroughly reviewed and discussed. As some of the detail has yet to be developed and to give the chairman adequate leeway for arrangement, only the general tentative outline is listed below:

Thursday morning — May 5, 1960

8 a.m.-9:30 a.m. — Panel seminar on Whiplash (Breakfast)

10 a.m. — Scientific papers

10:30 a.m. — General session

11 a.m.-12 noon — Scientific papers

Note: Thursday noon specialty group luncheon — meetings may include: (a) Arizona Chapter — American College of Chest Physicians, and (b) Arizona Pediatric Association.

Thursday evening specialty group dinner — meetings may include: (a) Western Orthopaedic Association, and (b) Arizona Society of Pathologists.

Friday morning — May 6, 1960

8 a.m.-9:30 a.m. — Panel seminar on Hypnosis (Breakfast)

9:30 a.m.-12 noon — Scientific papers

Note: Friday noon specialty group luncheon — meetings may include: (a) Greater Arizona Chapter — Allergy Foundation of America, and (b) Arizona Chapter — American College of Surgeons.

Saturday morning — May 7, 196

9 a.m.-12 noon — Scientific papers — Mystery Case

Again, the time schedules and arrangements are subject to change; also, additional specialty groups, including the Arizona Academy of General Practice may be added for either a luncheon-meeting or dinner-meeting. It was determined that the specialty groups on request for luncheon or dinner meetings will be assigned a time and place for such meetings as available.

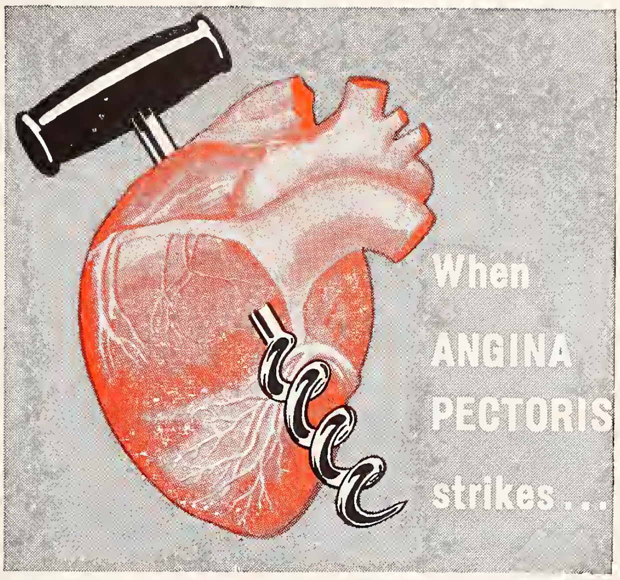
It was also suggested that possibly the governor of the State of Arizona may be invited to participate in the general session, Thursday morning, May 5.

Renewal of the previous programing to include specialty group participation in the scientific sessions arrangements was determined, granting those interested to select a speaker(s) and share expenses.

Publicity:

Doctor Roland F. Schoen (Casa Grande) was appointed publicity chairman and will outline a program to effectively accomplish the desired results making the 69th annual meeting of this association outstanding.

LOREL A. STAPLEY, M.D.,
Secretary



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Niphylline is safe, and well tolerated . . . exerts strengthening effect on heart muscles, and acts synergistically, remarkably reducing severity and frequency of cardiac attacks.

Indications: Relief and control of angina pectoris, cardiovascular symptoms, asthenia, coronary spasm with myocardial pain, prophylaxis and treatment of left ventricular insufficiency, cardiac dyspnea and oliguresis.

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Supplied: Bottles of 100 and 1000 tablets.

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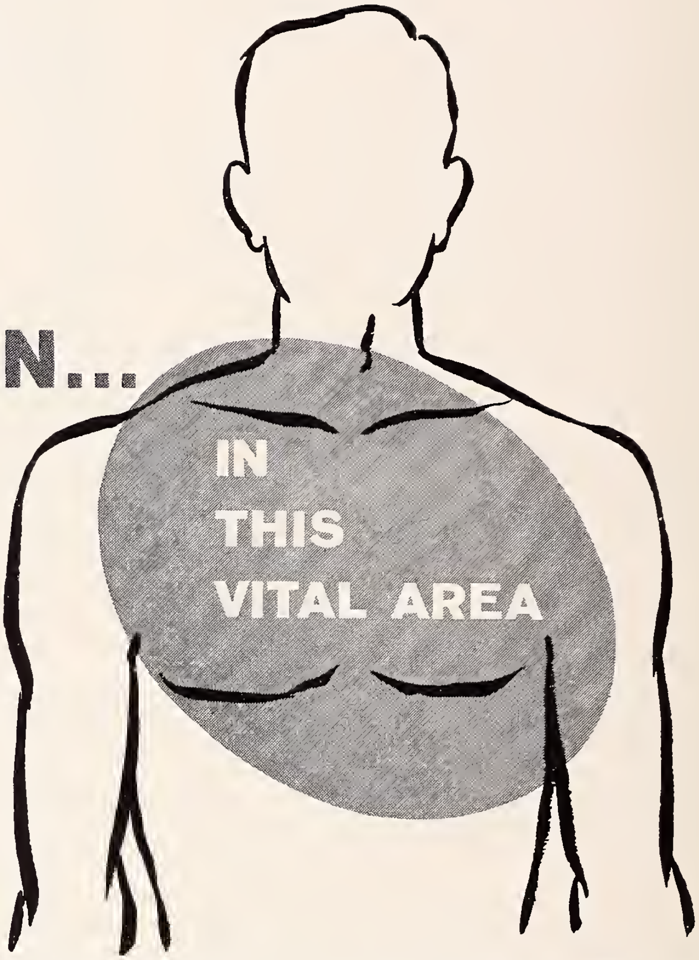

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Each Tablet Contains:
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BOARD OF MEDICAL EXAMINERS
STATE OF ARIZONA

THE Board of Medical Examiners of the State of Arizona at a regular meeting held Saturday, July 18, 1959, issued certificates to practice medicine and surgery in this state to the following doctors of medicine:

AHERNS, WALTER E. (Pd)	130 S. Scott, Tucson, Ariz.
ALCORN, ESTHER E. (GP)	6031 E. Sylvane, Tucson, Ariz.
ANDREWS, THURL E. (I-Ca)	926 E. McDowell Rd., Phoenix, Ariz.
BARBER, ROBERT D. (Path)	1011 N. Craycroft, Tucson, Ariz.
BEJARANO, CHARLES A. (GP)	718B Sullivan St., Miami, Ariz.
BELT, JOHN A. (GP)	713 N. Beaver, Flagstaff, Ariz.
BERTINO, JR., GEORGE G. (GS-GP)	212A Bruchman Bldg., Winslow, Ariz.
BEUKER, HERMAN (GP)	120 E. Michigan, Marshall, Mich.
BLINSTRUB, ALFONS A. (GP)	1626 N. 7th St., Phoenix, Ariz.
BREEN, HAL J. (P)	5051 N. 34th St., Phoenix, Ariz.
BRUNSTING, JR., LOUIS A. (ObG)	116 N. Tucson Blvd., Tucson, Ariz.
BRYAN, HARRY D. (GP)	U. S. Public Health Serv., Phoenix, Ariz.
CLEMENS, ALBERT L. (GS)	526 Des Moines Bldg., Des Moines, Iowa
CURTIS, BRUCE N. (GP)	Safford, Ariz.
CUTTS, ROBERT I. (P)	VA Hospital, Tucson, Ariz.
DAHLEN, RICHARD F. (D)	1520 N. Norton, Tucson, Ariz.
DEAN, DAVID L. (GS)	461 W. Catalina Dr., Phoenix, Ariz.
EPSTEIN, LLOYD S. (GS)	1535 N. Tucson Blvd., Tucson, Ariz.
EWING, RUTH E. (Gyn)	402 S. Downing Lane, Tucson, Ariz.
FREEL, JOHN A. (GP)	114 N. Madison, Bay City, Mich.
FRENCH, JAMES B. (S)	1100 Arizona St., Boulder City, Nev.
GREER, WILLIAM E. (ALR)	RR 1 Bird Lake, Vandalia, Mich.
HENRIE, JOHN N. (Or)	2620 N. 3rd St., Phoenix, Ariz.
HUNT, MAURICE E. (GP)	2534 Francis St., Jackson, Mich.
HURLEY, JAMES M. E. (GP)	1130 E. McDowell, Phoenix, Ariz.
JOHNSON, CHRISTINE A. (D)	1660 N. Berkeley Ave., Pomona, Calif.
JOHNSON, ROBERT W. (I)	1660 N. Berkeley Ave., Pomona, Calif.
KAMPFER, MERLIN W. (I)	461 W. Catalina Dr., Phoenix, Ariz.
KELLEY, W. RANSOM (R)	1130 E. McDowell Rd., Phoenix, Ariz.
LACY, JR., WATSON M. (GP)	Box 44, Page, Ariz.
McSWAIN, HANSEL T. (TS)	Greenway Station, Tucson, Ariz.
MATHEUS, CHARLES G. (Oph)	301 N. Central Med. Bldg., Phoenix, Ariz.
MAY, DERALD G. (P)	5051 N. 34th St., Phoenix, Ariz.
MIGRAY, EUGENE (GP-S)	846 W. Thomas Rd., Phoenix, Ariz.
MOSSER, ROBERT S. (I)	10901 Winner Rd., Independence, Mo.
NAUMAN, JAMES D. (R)	1603 N. Tucson Blvd., Tucson, Ariz.
ROBERTSON, ALEXANDER D. (GP-P)	6050 Camelback Rd., Scottsdale, Ariz.
SAAR, RICHARD E. (Or)	1313 N. 2nd St., Phoenix, Ariz.
SAULTS, CHARLES J. (GP)	Mullen, Neb.
SCHILL, AUSTIN E. (ObG)	405 Sixth Ave., Des Moines, Iowa
SEAGRAVES, JACK W. (GP)	412 Roosevelt St., Phoenix, Ariz.
SMITH, GAYLORD E. (GP)	694 E. Southern, Phoenix, Ariz.
SOMMERVILLE, ROBERT L. (GE)	Mayo Clinic, Rochester, Minn.
STEIDL, RICHARD A. (GP)	330 E. Francis Ave., LaHabra, Calif.
SUTHERLAND, LYNDON C. (GP)	Arizona State Univ., Tempe, Ariz.

TIMMONS, RICHARD P. (GP) .... 1602 N. 15th Ave., Phoenix, Ariz.
TRISLER, JOHN D. (ObG) .... 130 S. Scott St., Tucson, Ariz.
WALDMANN, EDWARD B. (I) .... 461 W. Catalina Dr., Phoenix, Ariz.
WARD, ADELE C. (GP) .... 744 N. Stone, Tucson, Ariz.
WASHBURN, J. BALLARD (GP) .... Box 997, Page, Ariz.
WILD, JOHN J. (Oph) .... 607 N. 4th Ave., Tucson, Ariz.
WILMOTH, JR., THOMAS C. (GP) .... 1509 E. Thomas Rd., Phoenix, Ariz.
WINEINGER, JOHN H. (I) .... 130 S. Scott St., Tucson, Ariz.
WOOD, JR., JAMES G. (R) .... 1219 N. Beaver St., Flagstaff, Ariz.
ZELL, JOHN R. (P) .... 5051 N. 34th St., Phoenix, Ariz.

HILL-BURTON GRANTS TO ARIZONA

WASHINGTON OFFICE,
ARIZONA MEDICAL ASSOCIATION

HE department of health, education, and welfare reports that as of June 30, the status of all Hill-Burton grants for the state of Arizona for projects approved during the past month is: Sacred Heart Home, Phoenix; estimated total cost, $2,463,338; approved federal share, $100,000; no additional beds.

Completed and in operation: 32 projects at a total cost of $19,287,417, including federal contribution of $6,347,503 and supplying 122 additional beds.

Under construction: seven projects at a total cost of $5,999,896, including federal contribution of $1,725,000 and designated to supply 62 additional beds.

Approved, but not yet under construction (including above): four projects at a total cost of $3,748,113, including $680,000 federal contribution and designed to supply 53 additional beds.

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CAPSULES—14 VITAMINS—11 MINERALS

Each capsule contains:

Vitamin A	5,000 U.S.P. Units
Vitamin D	500 U.S.P. Units
Vitamin B_{12} with AUTRINIC® Intrinsic Factor Concentrate	1/15 U.S.P. Oral Unit
Thiamine Mononitrate (B_1)	5 mg.
Riboflavin (B_2)	5 mg.
Niacinamide	15 mg.
Folic Acid	1 mg.
Pyridoxine HCl (B_6)	0.5 mg.
Ca Pantothenate	5 mg.
Choline Bitartrate	50 mg.
Inositol	50 mg.
Ascorbic Acid (C)	50 mg.
Vitamin E (as tocopheryl acetates)	10 I.U.
l-Lysine Monohydrochloride	25 mg.
Rutin	25 mg.
Ferrous Fumarate	30 mg.
Iron (as Fumarate)	10 mg.
Iodine (as KI)	0.1 mg.
Calcium (as $CaHPO_4$)	157 mg.
Phosphorus (as $CaHPO_4$)	122 mg.
Boron (as $Na_2B_4O_7.10H_2O$)	0.1 mg.
Copper (as CuO)	1 mg.
Fluorine (as CaF_2)	0.1 mg.
Manganese (as MnO_2)	1 mg.
Magnesium (as MgO)	1 mg.
Potassium (as K_2SO_4)	5 mg.
Zinc (as ZnO)	0.5 mg.

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Clear the air

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Very useful in... ... BRONCHITIS
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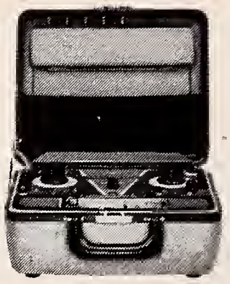

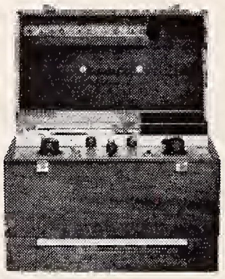

AN ELECTROCARDIOGRAPH for maximum usefulness in your *office examining room* . . . and an electrocardiograph that you can easily *take with you* on any call — are the reasons Sanborn Company developed the 100 Viso and 300 Visette ECG's.

Both produce permanent, easily interpreted, diagnostically accurate electrocardiograms. Both are simple to operate . . . and both will give stable, trouble-free operation year after year. But there are also these important differences: in the 18-pound Visette, every *practical* means is used to achieve the combination of extremely light weight, brief case size and "traveling" ruggedness. In the new 100 Viso for office use, where instrument portability is not a prime requirement, the design includes such additional features as *two* recording speeds, *three* recording sensitivities, provision for recording *other* waveforms, and *visual monitoring* by an external oscilloscope.

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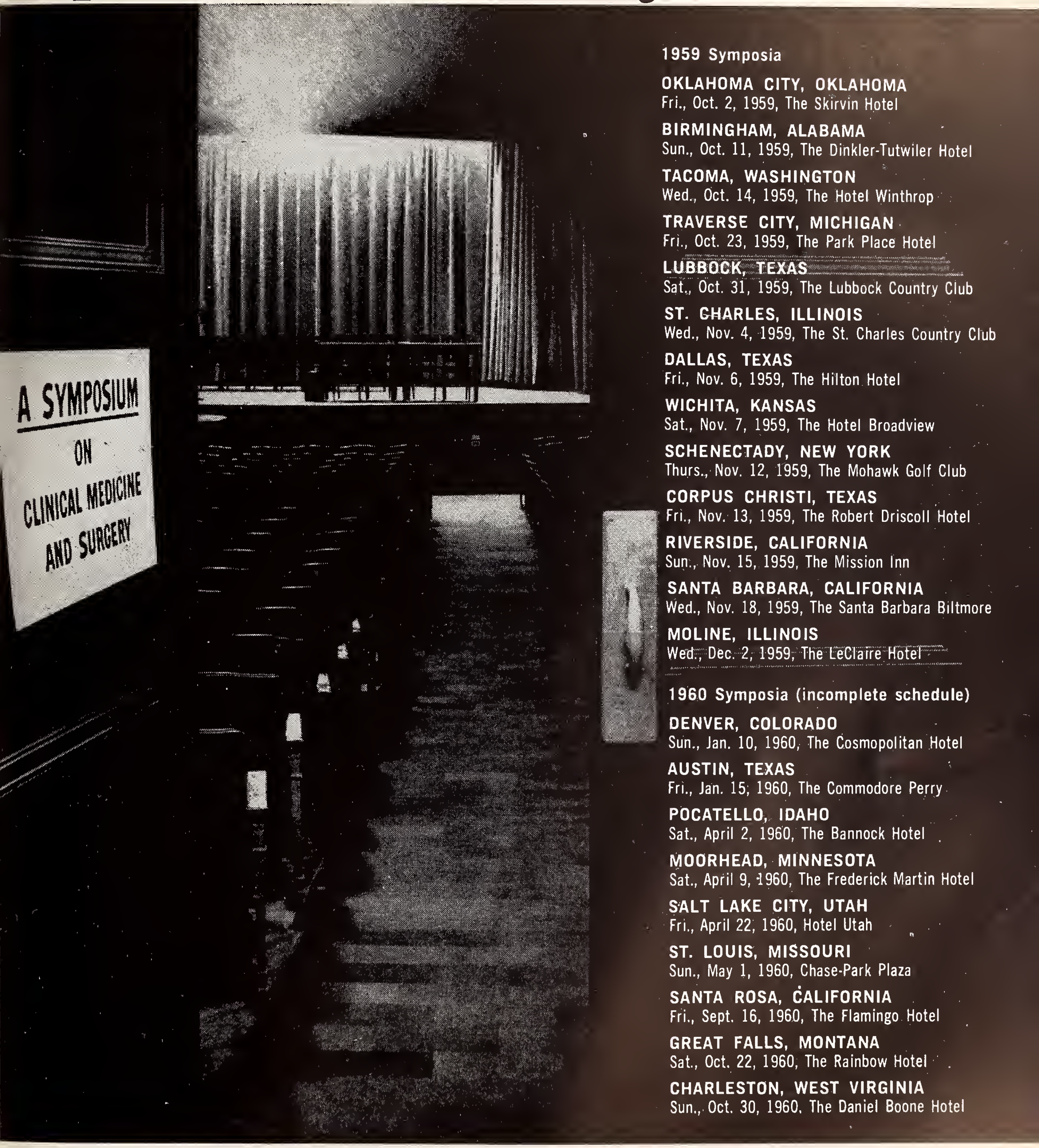

1959 Symposia

OKLAHOMA CITY, OKLAHOMA
Fri., Oct. 2, 1959, The Skirvin Hotel

BIRMINGHAM, ALABAMA
Sun., Oct. 11, 1959, The Dinkler-Tutwiler Hotel

TACOMA, WASHINGTON
Wed., Oct. 14, 1959, The Hotel Winthrop

TRAVERSE CITY, MICHIGAN
Fri., Oct. 23, 1959, The Park Place Hotel

LUBBOCK, TEXAS
Sat., Oct. 31, 1959, The Lubbock Country Club

ST. CHARLES, ILLINOIS
Wed., Nov. 4, 1959, The St. Charles Country Club

DALLAS, TEXAS
Fri., Nov. 6, 1959, The Hilton Hotel

WICHITA, KANSAS
Sat., Nov. 7, 1959, The Hotel Broadview

SCHENECTADY, NEW YORK
Thurs., Nov. 12, 1959, The Mohawk Golf Club

CORPUS CHRISTI, TEXAS
Fri., Nov. 13, 1959, The Robert Driscoll Hotel

RIVERSIDE, CALIFORNIA
Sun., Nov. 15, 1959, The Mission Inn

SANTA BARBARA, CALIFORNIA
Wed., Nov. 18, 1959, The Santa Barbara Biltmore

MOLINE, ILLINOIS
Wed., Dec. 2, 1959, The LeClaire Hotel

1960 Symposia (incomplete schedule)

DENVER, COLORADO
Sun., Jan. 10, 1960, The Cosmopolitan Hotel

AUSTIN, TEXAS
Fri., Jan. 15, 1960, The Commodore Perry

POCATELLO, IDAHO
Sat., April 2, 1960, The Bannock Hotel

MOORHEAD, MINNESOTA
Sat., April 9, 1960, The Frederick Martin Hotel

SALT LAKE CITY, UTAH
Fri., April 22, 1960, Hotel Utah

ST. LOUIS, MISSOURI
Sun., May 1, 1960, Chase-Park Plaza

SANTA ROSA, CALIFORNIA
Fri., Sept. 16, 1960, The Flamingo Hotel

GREAT FALLS, MONTANA
Sat., Oct. 22, 1960, The Rainbow Hotel

CHARLESTON, WEST VIRGINIA
Sun., Oct. 30, 1960, The Daniel Boone Hotel

In cooperation with medical organizations throughout the United States, Lederle continues to offer aid to post-graduate medical education through its Symposium program. Upon completion of the schedule above the number of Symposia presented will exceed 200 since the first meeting, sponsored by the Knoxville (Tenn.) Academy of Medicine eight years ago. Each meeting presents prominent authorities discussing important advances in clinical medicine and surgery. Activities are also planned for physicians' wives.

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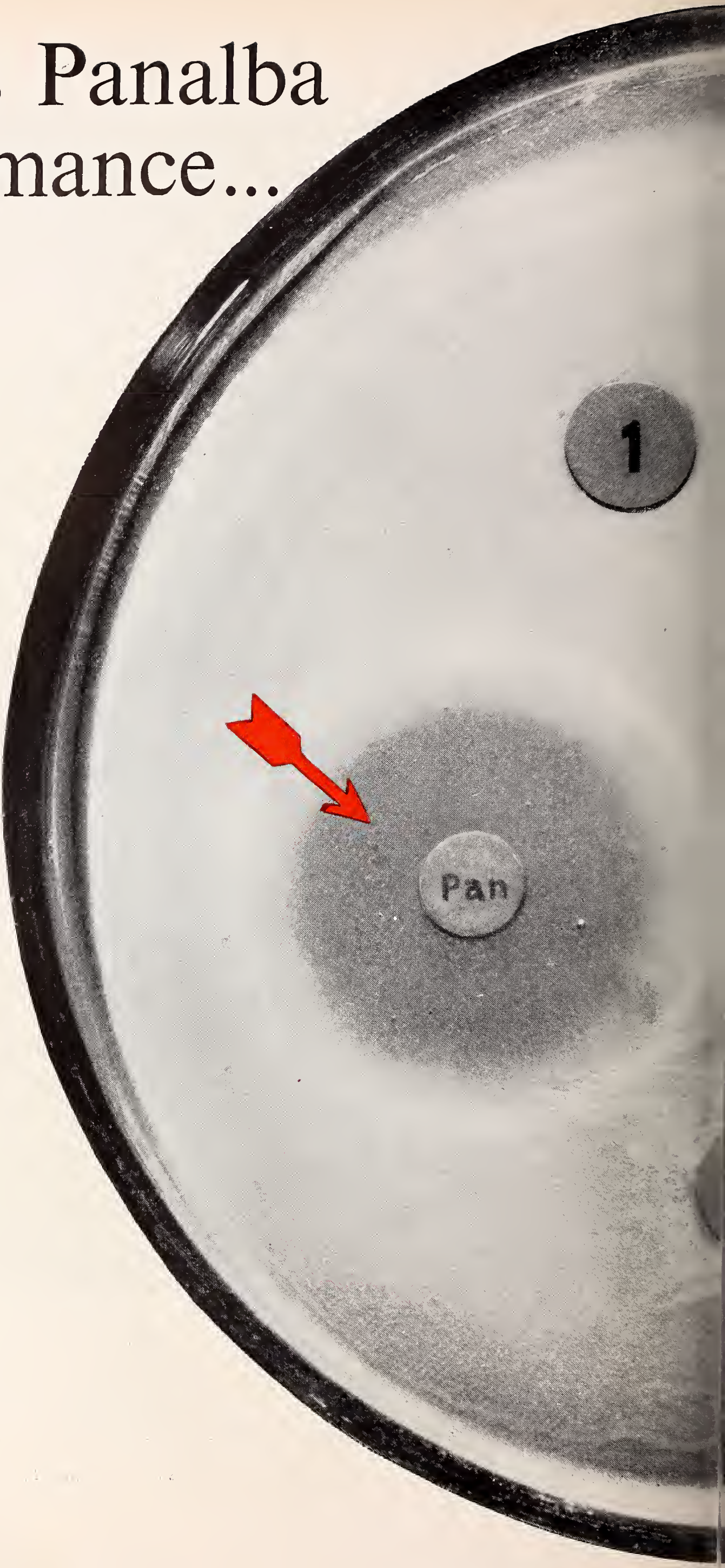

in pneumonia

. . . into a mixed culture of the three organisms commonly involved in pneumonia . . . *K. pneumoniae*, *Diplococcus pneumoniae*, and *Staphylococcus aureus* (in this case a resistant strain) . . . we introduce the five most frequently used antibiotics.

Twenty-four hours later (in this greatly enlarged photograph), note that only *one* of the five leading antibiotics has stopped *all* the organisms, including the resistant staph! This is Panalba.

In your next pneumonia patient . . . in *all* your patients with potentially-serious infections . . . provide this extra protection with your prescription:

Dosage—1 or 2 capsules 3 or 4 times a day. Supplied—Capsules containing Panmycin phosphate equivalent to 250 mg. tetracycline hydrochloride, and 125 mg. Albamycin as novobiocin sodium, in bottles of 16 and 100. *Now available:* new Panalba Half-Strength Capsules in bottles of 16 and 100.

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(Panmycin* Phosphate plus Albamycin*)

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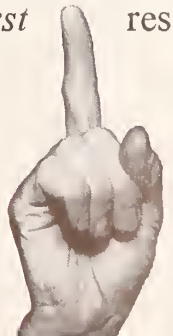

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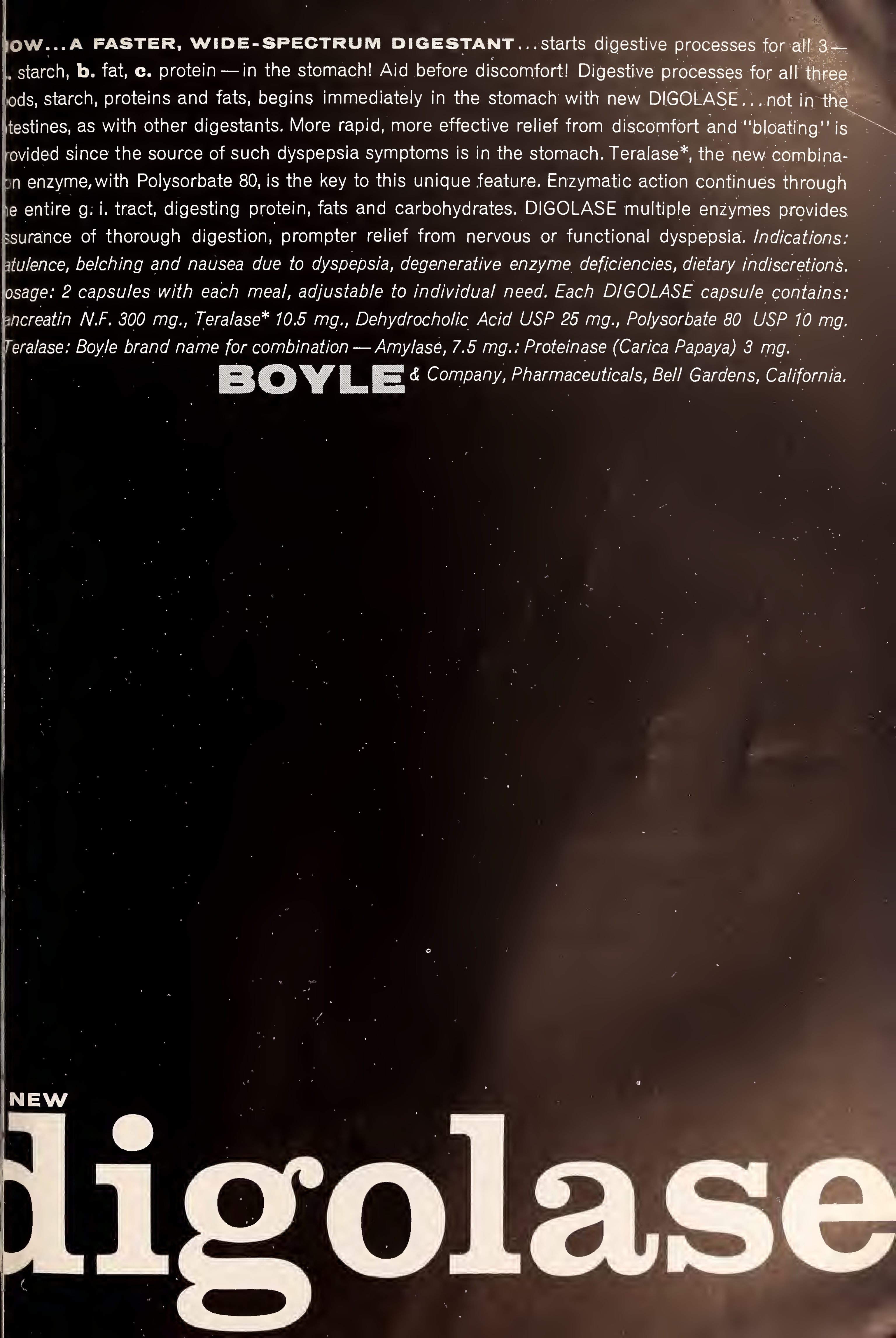
OW... A FASTER, WIDE-SPECTRUM DIGESTANT...starts digestive processes for all 3— . starch, **b.** fat, **c.** protein—in the stomach! Aid before discomfort! Digestive processes for all three ods, starch, proteins and fats, begins immediately in the stomach with new DIGOLASE...not in the testines, as with other digestants. More rapid, more effective relief from discomfort and "bloating" is ovided since the source of such dyspepsia symptoms is in the stomach. Teralase*, the new combina- n enzyme, with Polysorbate 80, is the key to this unique feature. Enzymatic action continues through e entire g. i. tract, digesting protein, fats and carbohydrates. DIGOLASE multiple enzymes provides surance of thorough digestion, prompter relief from nervous or functional dyspepsia. *Indications: atulence, belching and nausea due to dyspepsia, degenerative enzyme deficiencies, dietary indiscretions. osage: 2 capsules with each meal, adjustable to individual need. Each DIGOLASE capsule contains: ncreatin N.F. 300 mg., Teralase* 10.5 mg., Dehydrocholic Acid USP 25 mg., Polysorbate 80 USP 10 mg. Teralase: Boyle brand name for combination—Amylase, 7.5 mg.: Proteinase (Carica Papaya) 3 mg.*

BOYLE *& Company, Pharmaceuticals, Bell Gardens, California.*

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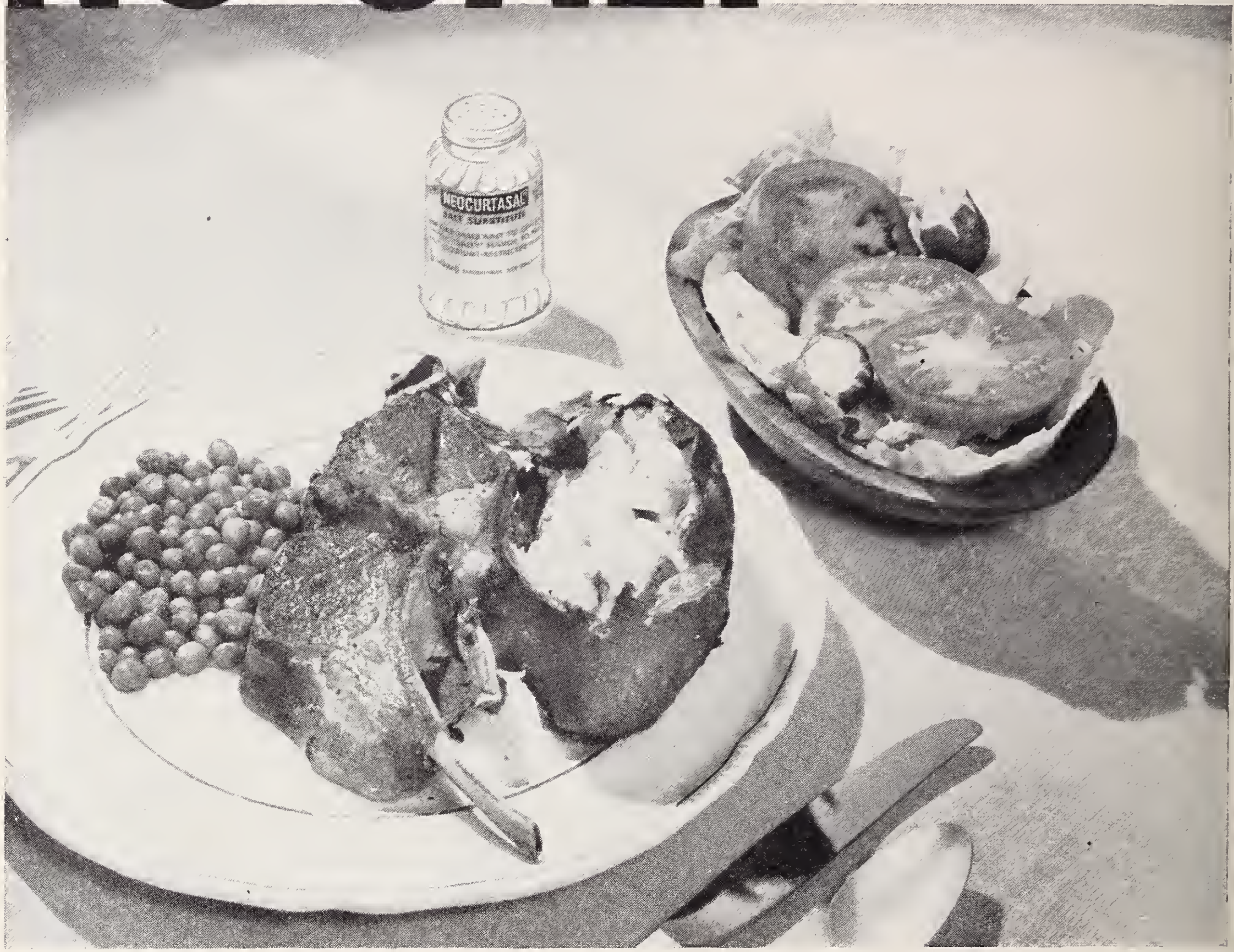
NO SALT ..*but seasoned*



A meal of even the most colorful and the most meticulously prepared food can be dreary eating without salt. Neocurtasal, for the patient on a low-sodium diet, brings back flavor to foods—makes eating a pleasure once more.

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An excellent salt replacement
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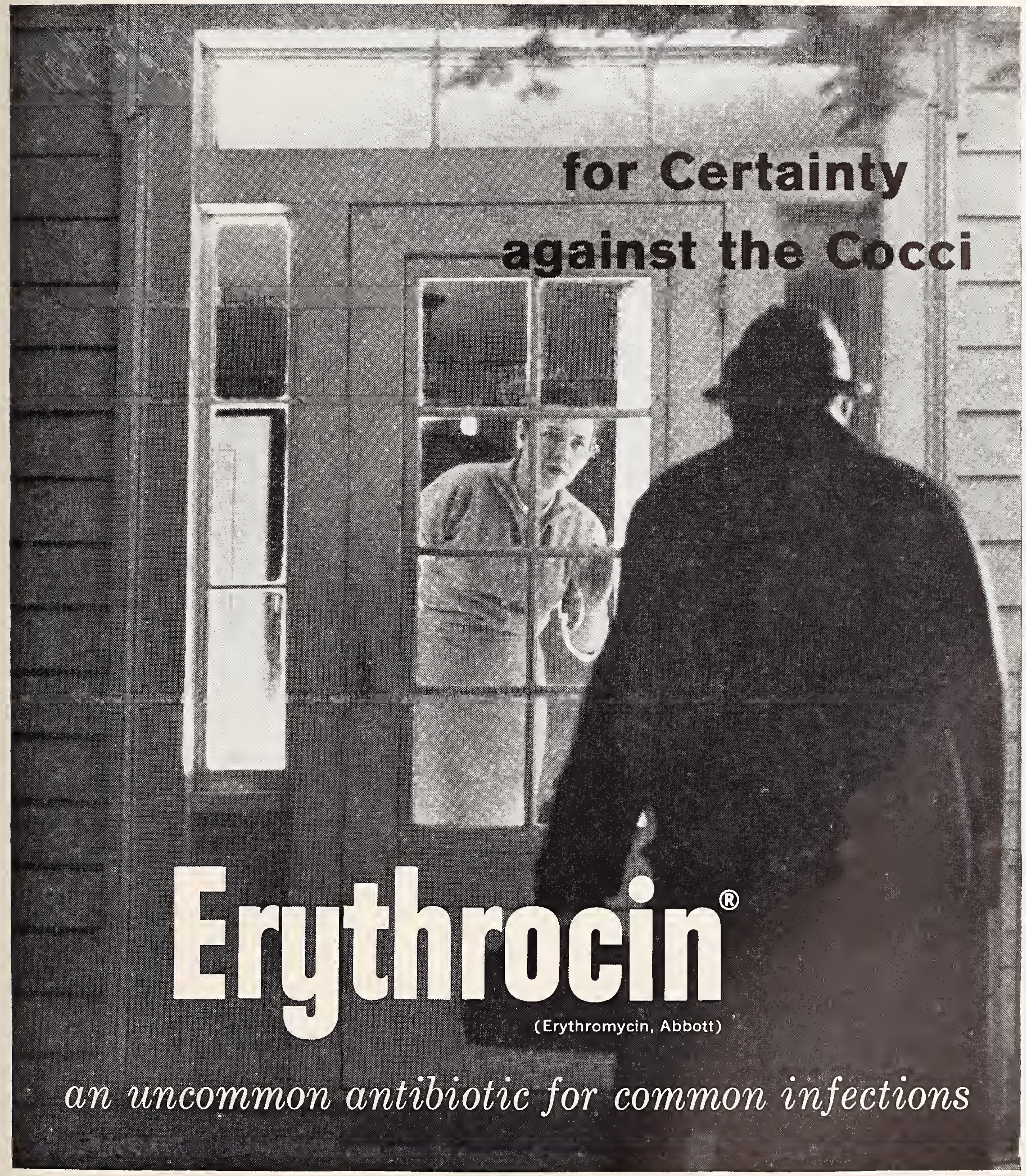

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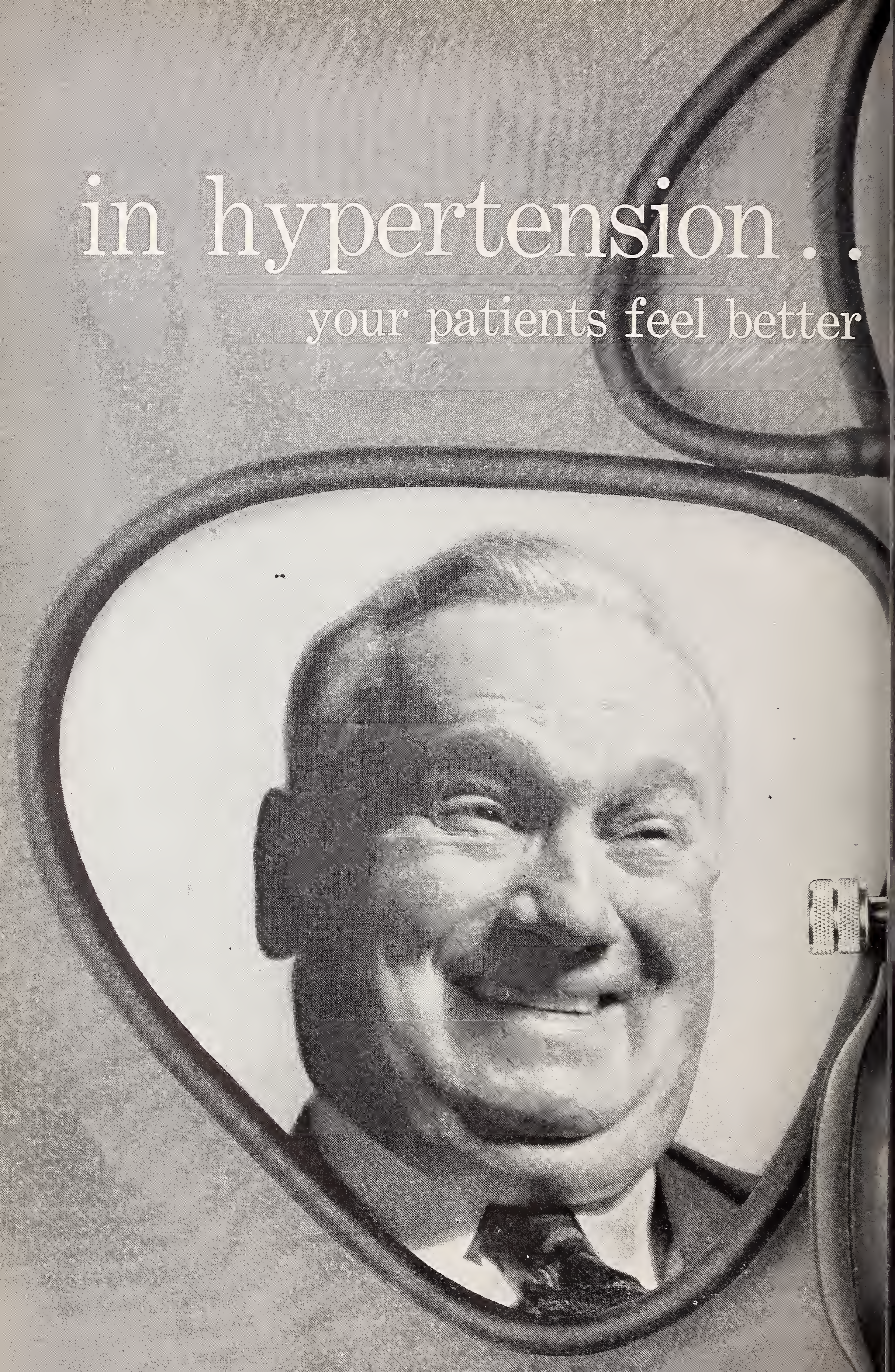
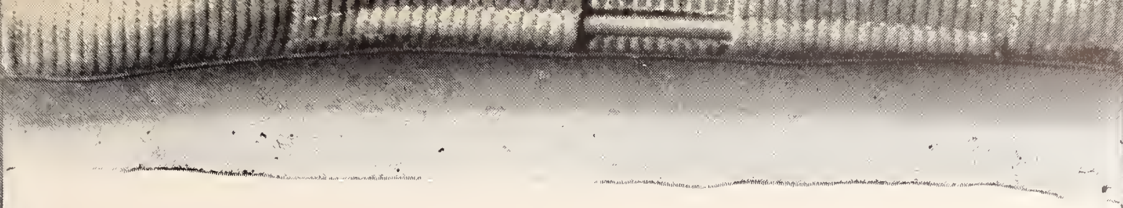
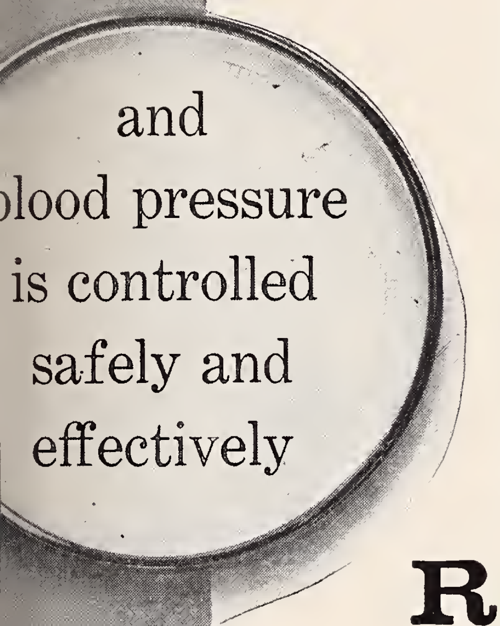

in hypertension . . .
your patients feel better





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lood pressure
is controlled
safely and
effectively

The hypertensive under treatment is frequently burdened with side effects of therapy including states of depression, fatigue, and lethargy. He finds little joy left in his life and laughter is almost a forgotten experience.

With RAUTENSIN and RAUVERA, two unique and dependable antihypertensive agents, patients feel better, have a brighter outlook and blood pressure is safely reduced.

in mild hypertension

RAUTENSIN provides smoother antihypertensive action with no sudden rebounds or abrupt declines, and can be given over long periods of time without impairing mental alertness, producing excessive lethargy or drowsiness. When tachycardia is present, RAUTENSIN slows heart rate 10 to 15 per cent. RAUTENSIN is less likely to cause mental depression.[1] The apprehensive hypertensive is calmed, yet side actions are " . . . either completely absent or so mild as to be inconsequential."[2]

RAUTENSIN®

each tablet contains 2 mg. of the purified alseroxylon complex of Rauwolfia serpentina

Dosage: For the first 20 to 30 days, 2 tablets (4 mg.) once daily, at bedtime. Thereafter, a maintenance dose of 1 tablet (2 mg.) daily will suffice for most patients.

in moderate to severe hypertension

RAUVERA produces smooth and steady antihypertensive action which persists over the entire twenty-four hours without peaks and valleys . . . no "saw tooth" effect. Patients show a marked subjective as well as objective improvement with a significant drop in blood pressure, yet with a very low incidence of side effects.[3] Abrupt rise in blood pressure does not occur even when therapy is interrupted.[4] Tolerance does not develop on prolonged administration. Sensitization reactions or postural hypotension do not occur. Headaches, fatigue, insomnia and "heart consciousness" rapidly disappear, leaving the patient feeling well and asymptomatic.

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each tablet contains 1 mg. of purified alseroxylon complex of Rauwolfia serpentina and 3 mg. alkavervir (Veratrum viride fraction)

Dosage: One tablet 3 or 4 times daily, ideally after meals, at intervals of not less than 4 hours.

1. Moyer, J. H.; Dennis, E., and Ford, R.: Arch. Int. Med. *96*:530, 1955.
2. Terman, L. A.: Illinois M. J. *3*:67, 1957.
3. La Barbera, J. F.: M. Rec. & Ann. *50*:242, 1956.
4. Bendig, A.: New York J. Med. *66*:2523, 1956.

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Age: 55 Sex: Male Race: White

Diagnosis: Rheumatoid arthritis.

Previous Therapy:
40 mg. triamcinalone per day.

Complicating States:
Duodenal ulcer, steroid intoxication.

Current Therapy: ARTHROPAN Liquid.

Results: The patient improved on ARTHROPAN and "...is now on Choline Salicylate [ARTHROPAN] alone and has returned to work."[1]

SUPPLIED: 8 and 16 oz. bottles.
Each ml. of ARTHROPAN Liquid contains
174 mg. of Choline Salicylate.
Each teaspoonful (5 ml.) contains 870 mg.
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1. Clark, G.M.: Personal Communication, 1958.

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help restore the normal blood picture—iron as ferric pyrophosphate to restore or maintain normal hemoglobin.

boost appetite and energy—vitamins . . . B_1, B_6 and B_{12}.

upgrade low-grade protein—cereals and other low protein favorites of children, upgraded by l-Lysine, work with meat and other top protein to build stronger bodies.

tastes good! Each daily cherry-flavored teaspoonful dose (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
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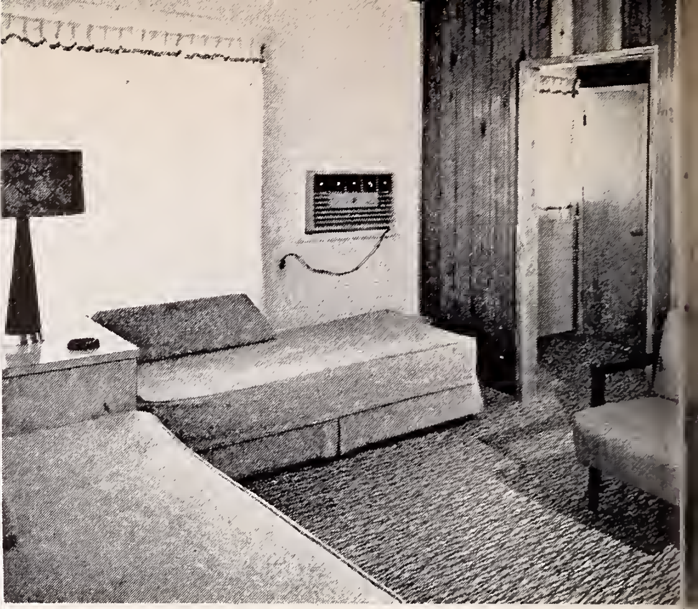

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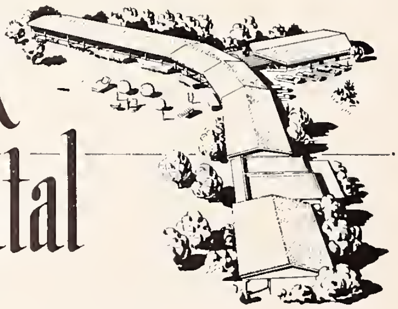

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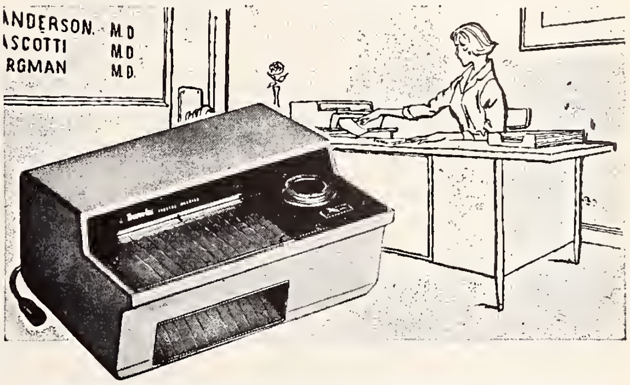
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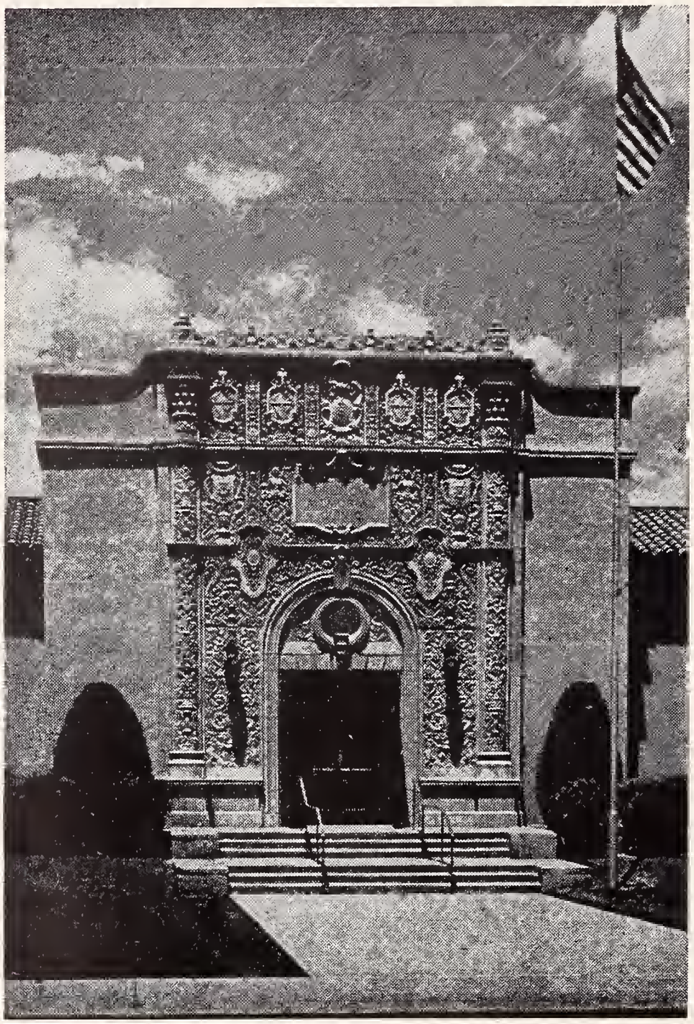

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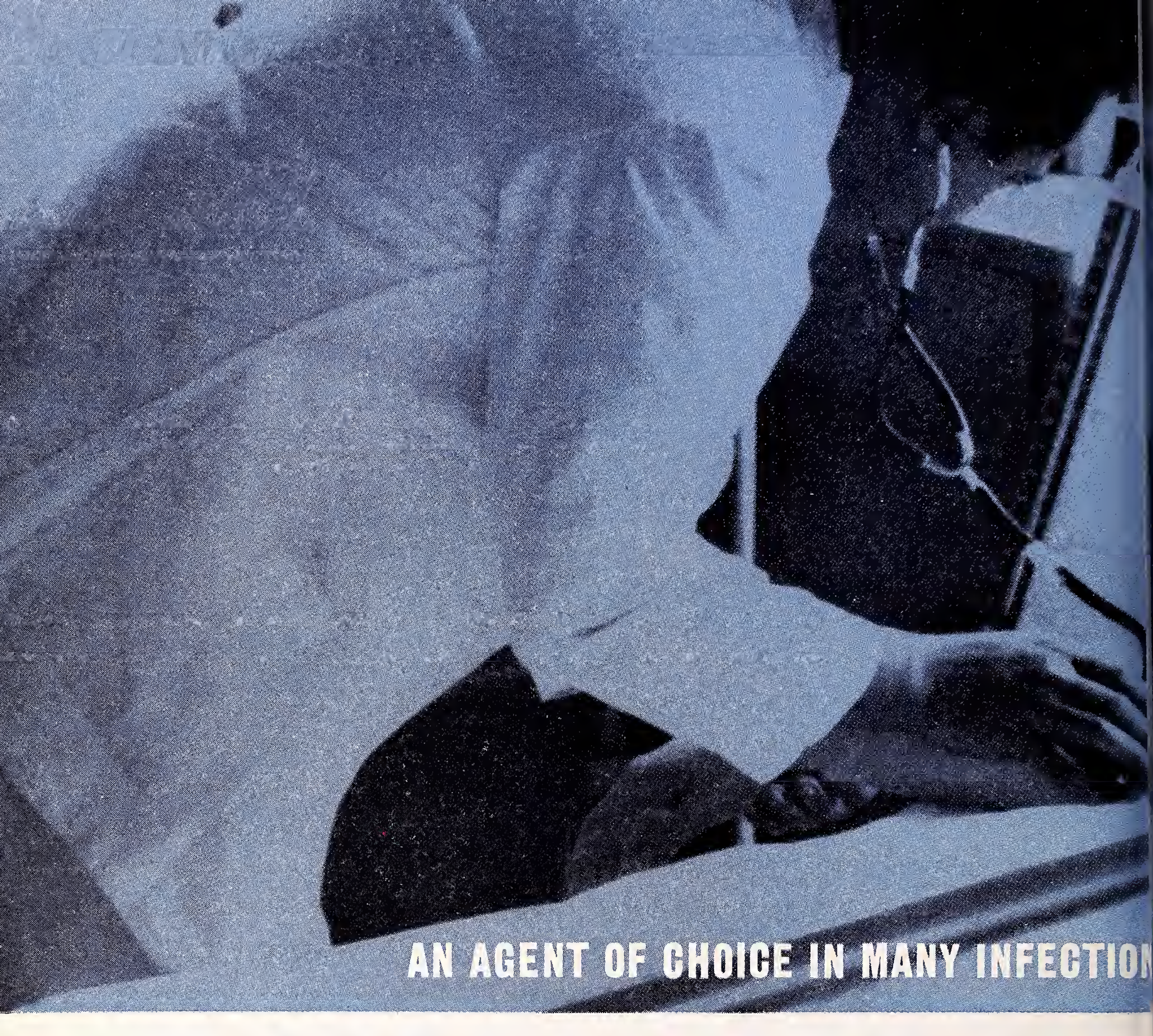
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REFERENCES: (1) Holloway, W. J., & Scott, E. G.: *Delaware M. J.* 29:159, 1957. (2) Suter, L. S., & Ulrich, E. W.: *Antibiotics Chemother.* 9:38, 1959. (3) Murphy, J. J., & Rattner, W. H.: *J.A.M.A.* 166:616, 1958. (4) Rhoads, P. S.: *Postgrad. Med.* 21:563, 19 (5) Horton, B. F., & Knight, V.: *J. Tennessee M. A.* 48:367, 1955. (6) Seneca, H.: *Am. Pract. & Digest Treat.* 10:622, 1959. (7) H W. H.: *M. Clin. North America* 43:191, 1959. (8) Seneca, H., *et al.*: *J. Urol.* 81:324, 1959. (9) Wolfsohn, A. W.: *Connecticut M* 22:769, 1958.

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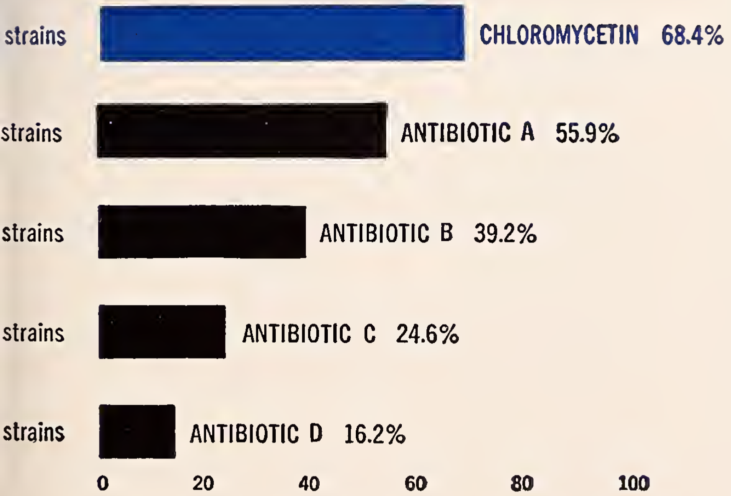

*Adapted from Suter & Ulrich.[2]
These antibiotics were tested by the tube dilution method, using a concentration of 12.5 mcg/ml. The percentages represent the total number of sensitive strains found in five *Proteus* species.

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References: 1. Cecil, R. L., et al.: J.A.M.A. 124:8 (Jan. 1) 1944. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Beckman, H.: Drugs, Their Nature, Action & Use, Saunders, Philadelphia, 1958, p. 527.

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ARIZONA MEDICINE
Journal of
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Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

(The Editors of the Journal assume no responsibility for opinions expressed in the articles contributed by individual members.)

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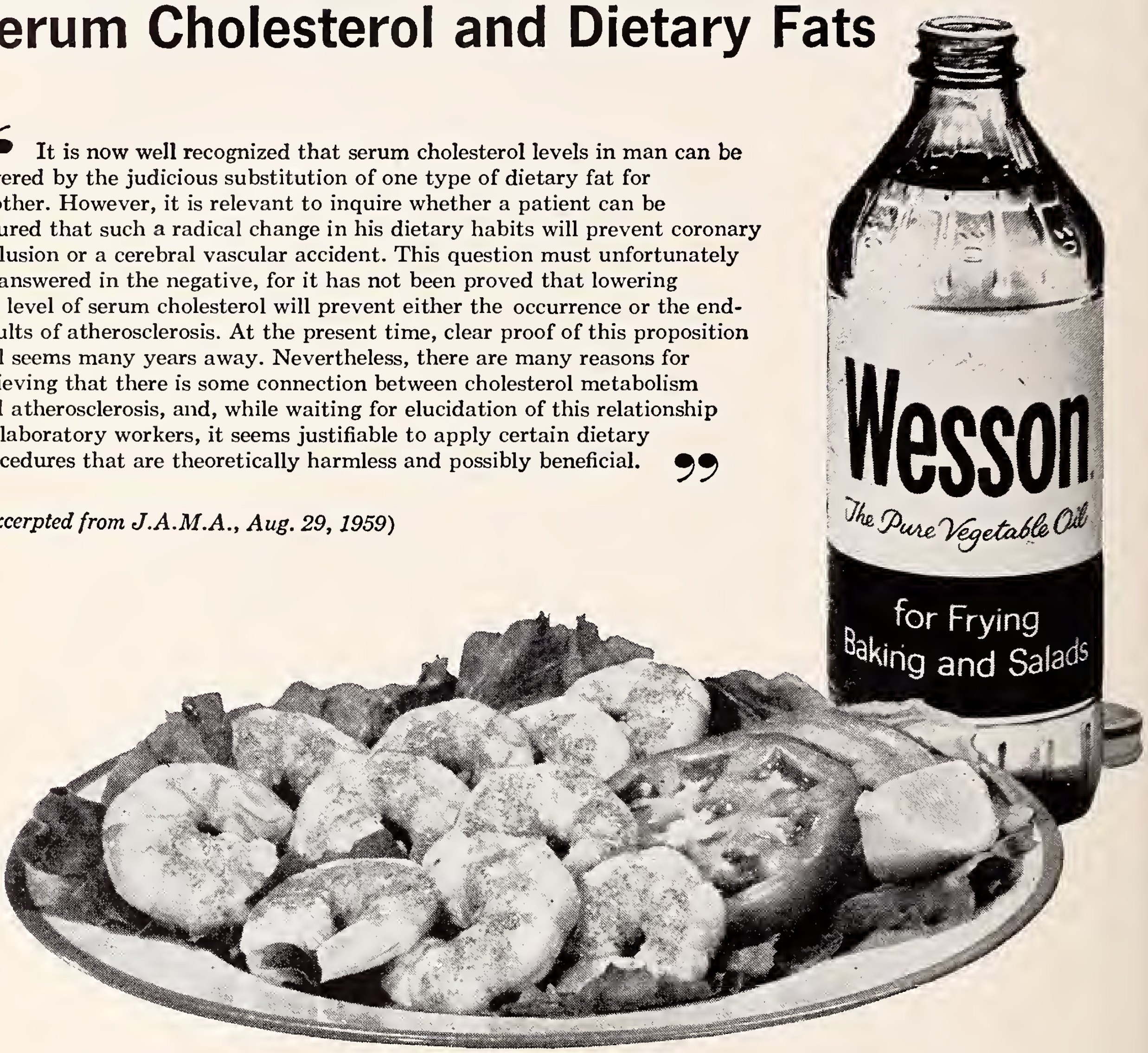
(*Excerpted from J.A.M.A., Aug. 29, 1959*)



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patient

relief comes fast and comfortably

–does not produce autonomic side reactions
–does not impair mental efficiency, motor control, or normal behavior.

Usual Dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets or as MEPROTABS*—400 mg. *unmarked,* coated tablets.

Miltown®
meprobamate (Wallace)

WALLACE LABORATORIES / *New Brunswick, N. J.*

CM-9470

NOW

. . . a new way to relieve pain and stiffness in muscles and joints

indicated in:

- MUSCLE STIFFNESS
- LUMBOSACRAL STRAIN
- SACROILIAC STRAIN
- WHIPLASH INJURY
- BURSITIS
- SPRAINS
- TENOSYNOVITIS
- FIBROSITIS
- FIBROMYOSITIS
- LOW BACK PAIN
- DISC SYNDROME
- SPRAINED BACK
- "TIGHT NECK"
- TRAUMATIC STRAINS AND BRUISES
- POSTOPERATIVE MYALGIA

■ Exhibits unusual analgesic properties, different from those of any other drug ■ Specific and superior in relief of SOMAtic pain ■ Modifies central perception of pain without abolishing natural defense reflexes ■ Relaxes abnormal tension of skeletal muscle

SOMA T.M.

N-isopropyl-2-methyl-2-propyl-1, 3-propanediol dicarbamate

■ More specific than salicylates ■ Less drastic than steroids

■ More effective than muscle relaxants

SOMA has an unique analgesic action. It apparently modifies central pain perception without abolishing peripheral pain reflexes. SOMA is particularly effective in relieving joint pain. Patients say that they feel better and sleep better with SOMA than with previously used analgesic, sedative or relaxant drugs.

SOMA also relaxes muscle hypertonia, with its stresses on related joints, ligaments and skeletal structures.

ACTS FAST. Pain-relieving and relaxant effects start in 30 minutes and last 6 hours.

NOTABLY SAFE. Toxicity of SOMA is extremely low. No effects on liver, endocrine system, blood pressure, blood picture or urine have been reported. Some patients may become sleepy, particularly on high dosage.

EASY TO USE. Usual adult dose is one 350 mg. tablet 3 times daily and at bedtime.

SUPPLIED: Bottles of 50 white coated 350 mg. tablets.

Literature and samples on request.

WALLACE LABORATORIES, NEW BRUNSWICK, N. J.

℞ Recent research* confirms the widening FIELD for WINE

CARDIOLOGY

WINE has been used with excellent effect for the relief of pain, discomfort, apprehension and anxiety in angina pectoris, thromboangiitis obliterans, Raynaud's disease and hypertension.

UROLOGY

The judicious use of WINE can brighten the otherwise monotonous, unappealing diet in renal disease. It increases glomerular blood flow, stimulates diuresis, is nonirritating to the kidneys.

GERIATRICS, CONVALESCENCE

By stimulating appetite, supplying quick energy source, relaxing tensions and increasing morale, the prudent use of WINE has been described as a balm for the convalescent and "milk" for the aged.

GASTROENTEROLOGY

In moderate amounts WINE increases gastric secretion, relaxes gastric tension and, therefore, is a valuable aid in the treatment of anorexia, hypochlorhydria, dyspepsia, spastic constipation and diarrhea.

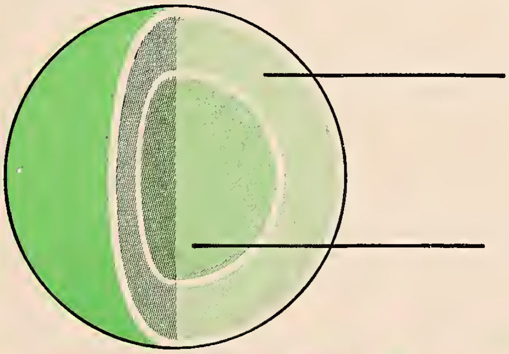
DIABETES

In the normal diet of the diabetic, WINE can serve as an excellent energy source which does not require the participation of insulin.

These and other therapeutic uses for wine are discussed in *"Uses of Wine in Medical Practice." For your free copy write—Wine Advisory Board, 717 Market Street, San Francisco 3, California.

the complaint: "nervous indigestion"

the diagnosis: any one of several nonspecific gastrointestinal disorders requiring relief of symptoms by sedative-antispasmodic action with concomitant digestive enzyme therapy. **the prescription:** a new formulation, incorporating in a single tablet the actions of Donnatal and Entozyme. **the dosage:** two tablets three times a day, or as indicated.



the formula: *in the gastric-soluble outer layer:*

Hyoscyamine sulfate	0.0518 mg.
Atropine sulfate	0.0097 mg.
Hyoscine hydrobromide	0.0033 mg.
Phenobarbital (⅛ gr.)	8.1 mg.
Pepsin, N.F.	150 mg.

in the enteric-coated core:

Pancreatin, N.F.	300 mg.
Bile salts	150 mg.

DONNAZYME™

Robins

A. H. ROBINS COMPANY, INCORPORATED • RICHMOND 20, VIRGINIA

who coughed?

WHENEVER COUGH THERAPY IS INDICATED

Hycomine®

SYRUP

THE *complete* Rx FOR COUGH CONTROL

cough sedative / antihistamine / expectorant

- relieves cough and associated symptoms in 15-20 minutes
- effective for 6 hours or longer
- promotes expectoration
- rarely constipates
- agreeably cherry-flavored

Each teaspoonful (5 cc.) of HYCOMINE contains:

Hycodan®		
Dihydrocodeinone Bitartrate (Warning: May be habit-forming)	5 mg.	6.5 mg.
Homatropine Methylbromide	1.5 mg.	
Pyrilamine Maleate		12.5 mg.
Ammonium Chloride		60 mg.
Sodium Citrate		85 mg.

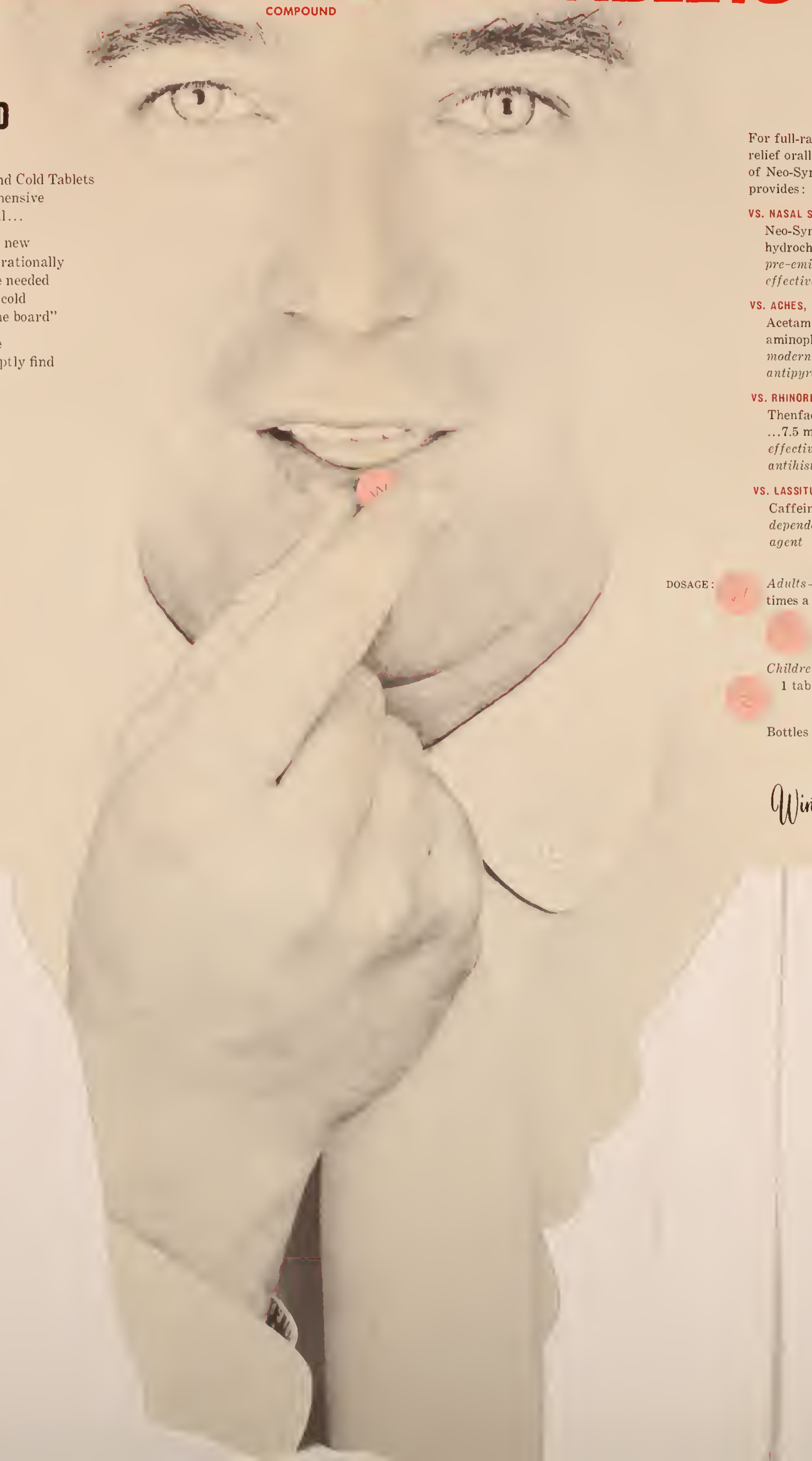
Supplied: As a pleasant-to-take syrup. May be habit-forming. Federal law permits oral prescription.

Endo®

Literature on request

ENDO LABORATORIES Richmond Hill 18, New York

U.S. Pat. 2,630,400



NEO-SYNEPHRINE® COLD TABLETS

COMPOUND

CONTROL OF COMMON COLD SYMPTOMS

with Neo-Synephrine Compound Cold Tablets is pharmacologically comprehensive and clinically practical...

COMPREHENSIVE because in this new preparation are rationally combined drug actions that are needed to control the common cold symptomatology "across the board"

PRACTICAL because the average patient will promptly find relief from his distress.

For full-range symptomatic relief orally each tablet of Neo-Synephrine Compound provides:

VS. NASAL STUFFINESS, TIGHTNESS— Neo-Synephrine hydrochloride...5 mg. *pre-eminent, orally effective decongestant*

VS. ACHES, CHILLS, FEVER— Acetaminophen (N-acetyl-*p*-aminophenol)...150 mg. *modern analgesic and antipyretic*

VS. RHINORRHEA— Thenfadil® hydrochloride ...7.5 mg. *effective, well tolerated antihistaminic*

VS. LASSITUDE, MALAISE— Caffeine...15 mg. *dependable, mild, stimulating agent*

DOSAGE:

Adults—2 tablets three times a day

Children 6 to 12 years—1 tablet three times a day

Bottles of 20 and 100 tablets

Winthrop LABORATORIES

TO
CLEAR
THE
AIRWAY
topically
in colds,
sinusitis
and allergic
rhinitis

NTZ®
Nasal Spray

quick
and
lasting
decongestion

Combining three effective intranasal medications, NTZ produces sustained decongestion ...aeration...sinus drainage. There are virtually no side effects, and NTZ maintains therapeutic action with repeated use. NTZ is available in a convenient, nonbreakable plastic squeeze bottle of 20 cc. that delivers a fine, even spray and does not leak. Even small children use it easily.

N*eo-Synephrine® hydrochloride, 0.5%* –
accepted vasoconstrictor and decongestant

T*henfadil® hydrochloride, 0.1%* –
dependable topical antihistaminic

Z*ephiran® chloride, 1:5000* –
antibacterial wetting agent and preservative

Winthrop LABORATORIES *New York 18, N.Y.*

NTZ, Neo-Synephrine (brand of phenylephrine), Thenfadil (brand of thenyldiamine) and Zephiran (brand of benzalkonium, as chloride, refined), trademarks reg. U.S. Pat. Off.

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new
an antihistamine
that is an antihistamine
-not a somnifacient

drowsiness *(other side effects)* rare...relief prompt...toxicity low

Investigators cite this new antihistamine's lack of side effects, its speed of action and its excellent tolerance. Nineteen investigators have treated over 800 patients with ALLERCUR. In 297 recent cases, 91% were side-effect-free. ALLERCUR is supplied in bottles of 100 scored tablets, each containing 20 mg. Clemizole HCl. Average dose is 2 to 4 tablets daily.

when allergies occur

℞ ALLERCUR*

(Clemizole HCl)

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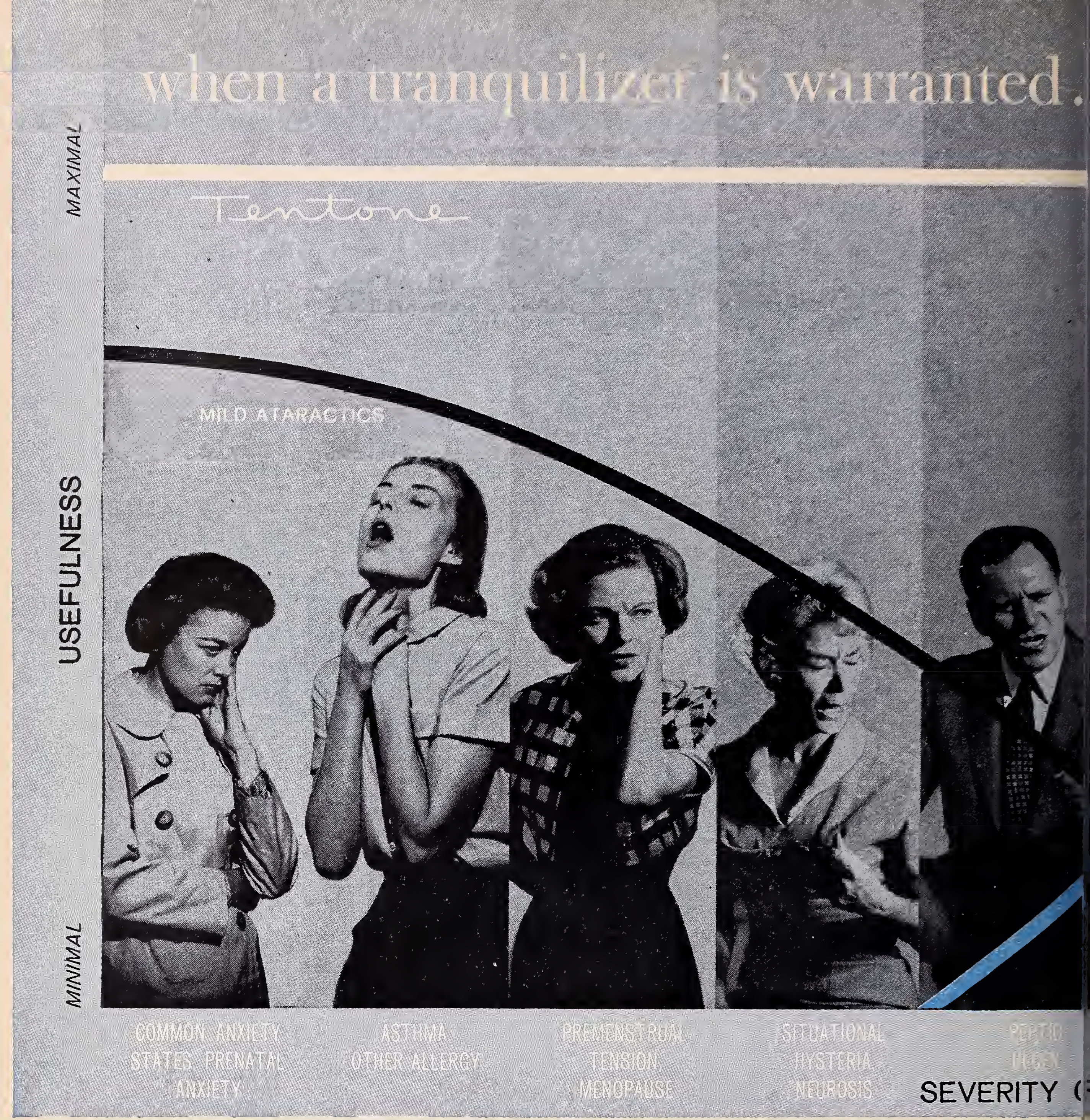

The extended usefulness of TENTONE is readily apparent

TENTONE® Methoxypromazine Maleate is a new, distinctive phenothiazine . . . highly active . . . for general use in mild and moderate emotional and psychosomatic disorders.

TENTONE elicits a striking, positive calming response[1,2] . . . with marked reduction of psychic disorientation, and low risk of blood, liver or other organic toxicity and intolerance.[1-4]

TENTONE parallels the weaker ataractics in low incidence of side effects. Freedom from induced depression is apparently even greater.[5]

TENTONE provides a broadly adaptable dosage range (30 to 500 mg. daily) to permit maximum control in cases of varying severity.

TENTONE is also indicated to relieve emotional stress in surgical, obstetric and other hospitalized patients.

sage: *Mild to moderate cases*—average starting dose, one 10 mg. or one 25 mg. tablet
ee or four times daily. *Moderate to severe*—average starting dose, one 50 mg. tablet
r times daily. *Supplied:* 10 mg., 25 mg., and 50 mg. tablets.

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Tentone

oxypromazine Maleate

Lederle

ERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

Lederle

RESEARCH:

key to Kent's popularity

In 1958, Kent made the greatest gain in popularity ever recorded by any filter cigarette in any year—a sales increase of 20-billion cigarettes.

Behind this popularity is a story of months and years of research, perfecting the remarkable combination of filter action and flavor found in today's Kent cigarette. In developing Kent, Lorillard research scientists recognized that smokers wanted, on the one hand, a really satisfying taste; on the other, reduced tars and nicotine. In addition, smokers demanded a free and easy draw.

These, then, were the objectives. The first scientific breakthrough in the project was the development of the exclusive Micronite filter, patented by Lorillard. This filter was created because of newly-discovered principles in the field of filtration, which have been previously described in these pages.

Though this filter satisfied everyone on its ability to reduce tars and nicotine to the lowest level among the largest selling brands, there was still work to be done in the areas of taste and draw. After additional months of research, a new tobacco blend was developed which delivered rich taste *after* the smoke had passed through the filter. Next in the series of laboratory triumphs was a method of improving the draw to compare with the most free-drawing of all filter brands.

The rest of the Kent story is a legend in the tobacco industry. Outside, independent research studies confirmed the fact that Kent had achieved its objectives. Smokers responded. In fact, during the past year, more smokers changed to Kent than to any other cigarette in America.

A Product of P. Lorillard Company—First with the finest cigarettes—through Lorillard Research!

Why should I use **KANTREX**® Injection* when there are so many other antibiotics available?

Because Kantrex Injection is bactericidal to a wide variety of organisms, including many that are highly resistant to the other antibiotics[3,4,10,12,13,17,18,20,21,23,24,25,27,30,33,35,37]

—organisms such as *Staph. aureus*, *Staph. albus*, *A. aerogenes*, *E. coli*, *H. pertussis*, *K. pneumoniae*, *Neisseria* sp., *Shigella*, *Salmonella* and many strains of *B. proteus*.

Q *But if I use* Kantrex *Injection, won't that help make bacteria resistant to it also?*

Next page, please . . . .

Q *But if I use* Kantrex *Injection, won't that help make bacteria resistant to it also?*

A A very good question, but it is reassuring to note that in almost two years of clinical use of Kantrex for the treatment of infections for which it is recommended, the emergence of Kantrex-resistant bacterial populations has not been a problem.

Q *My impression is that* Kantrex *is just another neomycin. Isn't that so?*

A Indeed not. The only thing Kantrex and neomycin have in common is a similar antimicrobial spectrum. Otherwise, they're very different: they have different chemical structures; the toxicity of Kantrex is "much less than that of neomycin"[14]; and clinically, Kantrex Injection is practical for systemic administration routinely, while neomycin is not.

Q *You mean that* Kantrex *Injection doesn't have the nephrotoxicity of neomycin?*

A Precisely. It's true that when Kantrex Injection is used, urinary casts — even slight albuminuria or microscopic hematuria — may appear, especially in poorly hydrated patients, but this does not reflect any progressive damage to the kidneys. These signs promptly disappear on adequate hydration or termination of therapy.

Q *Then why do you recommend reduced dosage in patients with renal impairment?*

A Because renal impairment causes an excessive accumulation of Kantrex in the blood and tissues, when usual doses are administered. Since Kantrex Injection is excreted entirely by the kidneys, renal impairment leads to unnecessarily high and prolonged blood levels; and such excessive concentrations increase the risk of ototoxicity.

Q *Is that why we see reports of patients developing hearing loss during* Kantrex *Injection therapy?*

A Yes. A study of the few reported cases in which patients have suffered impaired hearing will show that in every instance they had pre-existing or concurrent renal impairment, yet received usual or excessive doses of Kantrex Injection. Dosage recommendations for Kantrex Injection emphasize that in patients with renal dysfunction, adequate serum levels can be achieved with a fraction of the dose suggested for patients with normal kidney function — with minimal risk of ototoxicity.

Q *Since urinary tract infections are often accompanied by renal impairment, does that mean I shouldn't use* Kantrex *Injection in such conditions?*

A Not at all. With proper precautions, Kantrex Injection is an excellent drug for the treatment of urinary tract infections, especially those due to *Proteus*, *A. aerogenes* and *E. coli*, even when renal impairment is present.

Q *What are the "proper precautions" in a patient with impaired renal function?*

A The package literature covers them in detail. First, the daily dose should be reduced in such a patient. Then, if he is going to receive Kantrex Injection for 7 days or more, a pre-treatment audiogram should be done, and it should be repeated at appropriate intervals during therapy. If tinnitus or subjective hearing loss develops, or if followup audiograms show significant loss of high frequency response, Kantrex therapy should be discontinued. However, therapy for 7 days or more

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ycin sulfate injection (Bristol)

is seldom required because the clinical response to Kantrex Injection is so rapid.

Q *Why do you put so much emphasis on Kantrex's "rapid action"? Every antibiotic I've heard about is supposed to be "rapid acting."*

A There is such an abundance of clinical evidence about "rapid acting" that it takes Kantrex Injection out of the "supposed-to" class.[1,2,3,7,8,9,11,15,16,19,21,22,26,29,32,33] Remember, the effectiveness of Kantrex Injection therapy can usually be appraised in 24 to 36 hours. That's definite evidence of rapid action. In fact, one group of investigators reported that "the rapidity with which bacteria are killed by this agent is reflected by the promptness of the clinical response."[29]

Q *Does Kantrex Injection cause blood dyscrasias?*

A In extensive clinical and toxicity studies by numerous investigators, as well as almost two years of general use, not a single instance of such toxicity has been reported.

Q *Can I administer Kantrex Injection in any other way than by the intramuscular route?*

A Yes. While it's usually given intramuscularly, other routes are practicable: intravenous, intraperitoneal, by aerosol, and as an irrigating solution. Complete instructions are included in the package insert.

Q *So you think I ought to use Kantrex Injection as my first choice antibiotic in staph and gram-negative infections?*

A Yes — because all evidence to date indicates that it is bactericidal against a wide range of organisms...rapid acting...does not encourage development of bacterial resistance...is well tolerated in specified dosage...and has not caused any blood dyscrasias.

KANTREX CAPSULES

for local gastrointestinal therapy...
not for systemic infections

Q *Why can't I use Kantrex Capsules for systemic medication?*

A Because there is only negligible absorption of Kantrex from the gastrointestinal tract.[3,5,6,8,28,34] Thus, capsules cannot provide effective blood levels.

Q *Then what are Kantrex Capsules used for?*

A Preoperative bowel sterilization, and local treatment of intestinal infections due to kanamycin-sensitive organisms.

Q *I've been using neomycin for preoperative bowel sterilization. Why should I switch to Kantrex Capsules?*

A Because Kantrex has been rated as "superior to neomycin" for this purpose.[6] It provides rapid and satisfactory control of coliforms, clostridia, staphylococci and streptococci; yeasts do not proliferate; stool concentrations of the drug are exceptionally high; and nausea, vomiting or intestinal irritation have not been observed.[5,6]

Q *What advantages do Kantrex Capsules offer me in the treatment of intestinal infections?*

A A high degree of effectiveness against most of the pathogens responsible for such infections: *Salmonella, Shigella, Staph. aureus, E. coli* and *Endamoeba histolytica*. Moreover, their use has been "remarkably free of any side effects."[31]

KANTREX

INJECTION KANAMYCIN SULFATE INJECTION

INDICATIONS

Infections due to kanamycin-sensitive organisms, particularly staph or "gram-negatives" genito-urinary infections; skin, soft tissue and post-surgical infections; respiratory tract infections; septicemia and bacteremia; osteomyelitis and periostitis.

DOSAGE: INTRAMUSCULAR ROUTE

Recommended daily dose is 15 mg. per kg. of body weight, in 2 to 4 divided doses.

For intramuscular administration, Kantrex Injection should be injected deeply into the upper outer quadrant of the gluteal muscle.

TOXICITY

When the recommended precautions are followed, the incidence of toxic reactions to Kantrex is low. In well hydrated patients under 45 years of age with normal kidney function, receiving a total dose of 20 Gm. or less of Kantrex, the risk of ototoxic reactions is negligible.

In patients with renal disease and impaired renal function, the daily dose of Kantrex should be reduced in proportion to the degree of impairment to avoid accumulation of the drug in serum and tissues, thus minimizing the possibility of ototoxicity. In such patients, if therapy is expected to last 7 days or more, audiograms should be obtained prior to and during treatment. Kantrex therapy should be stopped if tinnitus or subjective hearing loss develops, or if audiograms show significant loss of high frequency response.

OTHER ROUTES OF ADMINISTRATION

Kantrex should be used by intravenous infusion only when the intramuscular route is impracticable. Kantrex can also be employed for intraperitoneal use, aerosol treatment, and as an irrigating solution. See package insert for directions.

PRECAUTIONS

Use of antibiotics may occasionally result in overgrowth of non-sensitive organisms. If superinfection appears during therapy, appropriate measures should be taken.

SUPPLY

Available in rubber-capped vials as a ready-to-use sterile aqueous solution in two concentrations (stable at room temperature indefinitely):

KANTREX Injection, 0.5 Gm. kanamycin (as sulfate) in 2 ml. volume.
KANTREX Injection, 1.0 Gm. kanamycin (as sulfate) in 3 ml. volume.

CAPSULES (for local gastrointestinal therapy; not for systemic medication)

INDICATIONS AND DOSAGE

For preoperative bowel sterilization: 1.0 Gm. (2 capsules) every hour for 4 hours, followed by 1.0 Gm. (2 capsules) every 6 hours for 36 to 72 hours.

For intestinal infections: Adults: 3.0 to 4.0 Gm. (6 to 8 capsules) per day in divided doses for 5 to 7 days. Infants and children: 50 mg. per kg. per day in 4 to 6 divided doses for 5 to 7 days.

PRECAUTION

Preoperative use of Kantrex Capsules is contraindicated in the presence of intestinal obstruction. Although only negligible amounts of Kantrex are absorbed through intact intestinal mucosa, the possibility of increased absorption from ulcerated or denuded areas should be considered.

SUPPLY

Kantrex Capsules, 0.5 Gm. kanamycin (as sulfate), bottles of 20 and 100.

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Bristol LABORATORIES INC. • Syracuse, New York

Now —All cold symptoms can be controlled

Tussagesic

timed-release tablets

Controls congestion
with Triaminic,[1,2,3] the leading oral nasal decongestant.

Controls aches and fever
with well-tolerated APAP, non-addictive analgetic[4] and excellent antipyretic.[5]

Each TUSSAGESIC Tablet provides:

TRIAMINIC®	50 mg.
(phenylpropanolamine HCl	25 mg.
pheniramine maleate	12.5 mg.
pyrilamine maleate	12.5 mg.)
Dormethan (brand of dextromethorphan HBr)	30 mg.
Terpin hydrate	180 mg.
APAP (N-acetyl-p-aminophenol)	325 mg.

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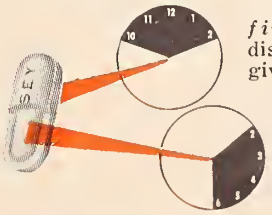
Controls cough centrally
with non-narcotic Dormethan, possessing "amply demonstrated" antitussive activity,[6] as effective as codeine.

Liquefies tenacious mucus
with terpin hydrate, classic expectorant.

Prompt and prolonged relief because of this special "timed release" design:



first – the outer layer dissolves within minutes to give 3 to 4 hours of relief

then – the inner core releases its ingredients to sustain relief for 3 to 4 more hours

Dosage: One tablet in the morning, midafternoon and at bedtime. Pediatric dosage chart for Tussagesic Suspension available on request.

TUSSAGESIC SUSPENSION provides palatability and convenience which make it especially attractive to children and other patients who prefer liquid medication.

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G-11® (Hexachlorophene USP), deodorant

FORTIFIED — with Sodium Lauryl Sulfate and Alkyl Aryl Sulfonate.

DETERGENT — High surface activity in acid and alkaline media.

LOW SURFACE TENSION — Increases penetration into vaginal rugae and dissolution of organisms such as Trichomonas and fungus.

HIGH SURFACE ACTIVITY — Liquifies viscus mucus on vaginal mucosa releasing accumulated debris in the vaginal tract.

Buffered to control a normal vaginal pH.

ETHICALLY PKGED, net wt. ....10 oz.

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The Hobby Horse Ranch School is both home and school for a small group of children. It welcomes the child who is mentally retarded and physically handicapped as well as the backward child who suffers no physical handicap.

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Directors: Blanche C. Lightowler, B.A.
Matthew W. Lightowler

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reduces pain in angina pectoris

NIAMID, in intensive clinical tests, has proved to have a high degree of safety and to be a valuable adjunct in the management of the anginal syndrome. NIAMID produces striking symptomatic improvement in angina patients...

- **reduces frequency of anginal episodes**
- **diminishes severity of attacks**
- **decreases nitroglycerin requirements**
- **renews sense of well-being**

Note: Because of dramatic relief of symptoms and increased sense of well-being in anginal cases, it is advisable to caution the patient against overexertion.

DOSAGE: Start with 75 mg. of NIAMID daily in single or divided doses. After 2 weeks or more, adjust the dosage, depending upon patient response, in steps of one or one-half 25 mg. tablet. Once improvement is seen, gradually reduce dosage to the maintenance level. Many patients respond to NIAMID within a few days, others within 7 to 14 days. NIAMID is available as 25 mg. (pink) and 100 mg. (orange) scored tablets.

A Professional Information Booklet giving detailed information on NIAMID *is available on request from the Medical Department, Pfizer Laboratories, Division, Chas. Pfizer & Co., Inc., Brooklyn 6, N. Y.*

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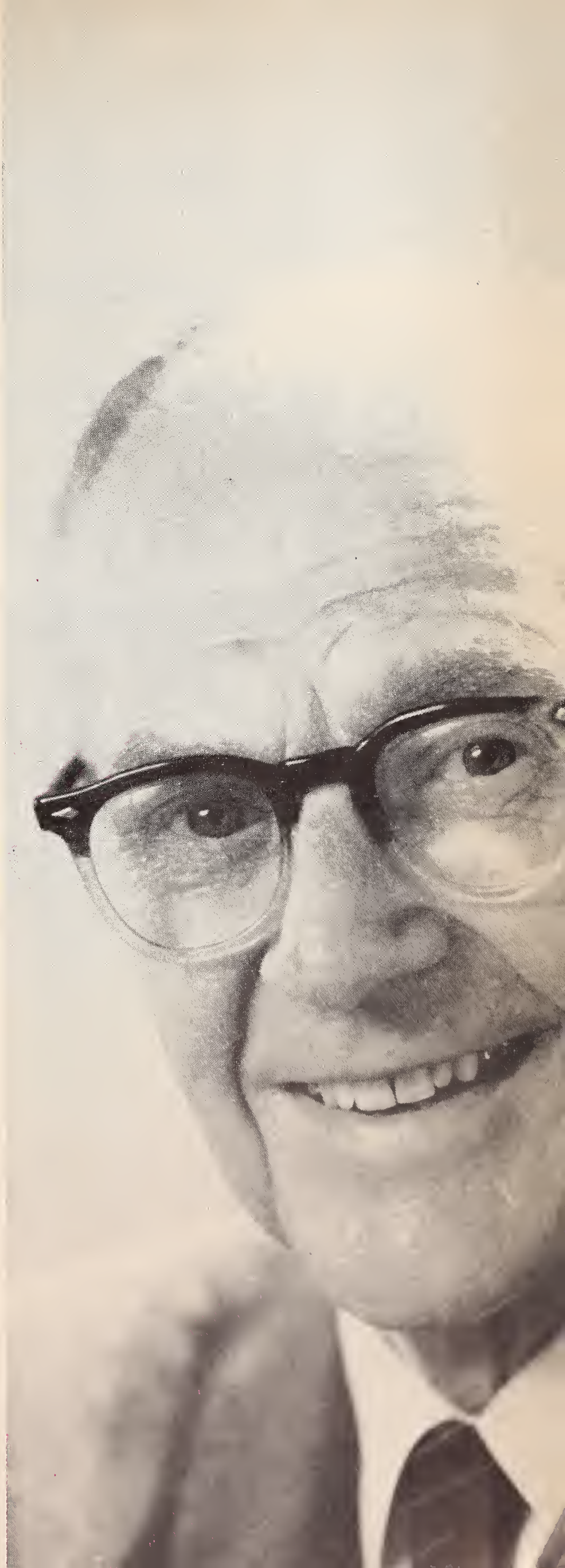
Pfizer *Science for the world's well-being*™



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Physicians, through ever increasing recommendation, have long demonstrated their confidence in the efficacy, potency and purity of Bayer Aspirin, the world's first aspirin.

And the same manufacturing skill, the same 106 ingredient and product tests, the same exclusive processes which contribute to the superiority of Bayer Aspirin set the standards of excellence for Bayer Aspirin for Children.

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Outstanding
relief from
torticollis and
anxiety and
tension states
with

Trancopal®

THE FIRST TRUE "TRANQUILAXANT"

Here is what you can expect when you prescribe

case profile no. 2840*

for torticollis

A 55-year-old man complained of a painful, very stiff neck on the left side. There was marked muscle spasm that seemed to involve primarily the trapezius muscle. He had a severe headache, with the pain radiating down the left side of the neck to the shoulder. There were no other findings on physical examination and results of routine laboratory tests were normal.

Trancopal was prescribed in a dosage of 200 mg. q.i.d. The first and second dose of Trancopal gave only moderate relief. However, after the third dose, there was marked relief of the stiffness of the neck, as well as the headache and shoulder pain.

After the fourth dose, medication was gradually decreased and was discontinued on the sixth day. One week later, the patient had moderate recurrence of the torticollis, and Trancopal was again prescribed in doses of 200 mg. q.i.d. The patient obtained complete relief in one day and no further treatment was required.

THE FIRST TRUE "TRANQUILAXANT"

Trancopal®

for anxiety and tension states

case profile no. 3382*

A 35-year-old woman, a professional model, had an acute, severe attack of anxiety. She was irrational and unable to eat, and was very restless.

Initial medication consisted of aspirin with codeine and later meprobamate. Neither was effective, and the patient's condition became worse. She had to be hospitalized because of the marked anxiety. Trancopal was then prescribed in a dosage of 200 mg. q.i.d., in addition to bed rest.

After the second dose of 200 mg. of Trancopal, the patient became calm and rational, and was able to eat. The dosage of Trancopal was gradually reduced to 100 mg. q.i.d. on the fourth hospital day, after which the patient was discharged and was able to return to her normal occupation.

**Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.*

Turn page for complete listings of Indications and Dosage.

THE FIRST TRUE "TRANQUILAXANT"

Trancopal

potent MUSCLE RELAXANT
effective TRANQUILIZER

Indications:

Musculoskeletal[1]	**Psychogenic**[1]
Neck pain (torticollis, etc.)	Anxiety and tension states
Low back pain (lumbago, etc.)	Dysmenorrhea
Bursitis	Premenstrual tension
Rheumatoid arthritis	Asthma
Osteoarthritis	Angina pectoris
Disc syndrome	Alcoholism
Fibrositis	
Ankle sprain, tennis elbow, etc.	
Myositis	
Postoperative muscle spasm	

Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in fifteen to thirty minutes and lasts from four to six hours. The higher dosage is recommended for the treatment of patients in the acute stages of painful musculospastic conditions, and anxiety and tension states. Children (5 to 12 yrs.), 50 mg. three or four times daily.

Supply:

Trancopal Caplets®
100 mg. (peach colored, scored), bottles of 100.

New strength ▶

Trancopal Caplets
200 mg. (green colored, scored), bottles of 100.

"Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."[2]

"The effect of this preparation in these cases [skeletal muscle spasm] was excellent and prompt . . ."[3]

". . . Trancopal is a most valuable drug for relieving tension, apprehension and various psychogenic states."[4]

---

1. Collective Study, Department of Medical Research, Winthrop Laboratories.
2. Lichtman, A. L. (N.Y. Polyclinic M. Sch. & Hosp.): Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958.
3. Mullin, W. G., and Epifano, Leonard (Long Island College Hosp.): Am. Pract. & Digest Treat. To be published.
4. Ganz, S. E. (New York, N. Y.): J. Indiana M. A. 52:1134, July, 1959.

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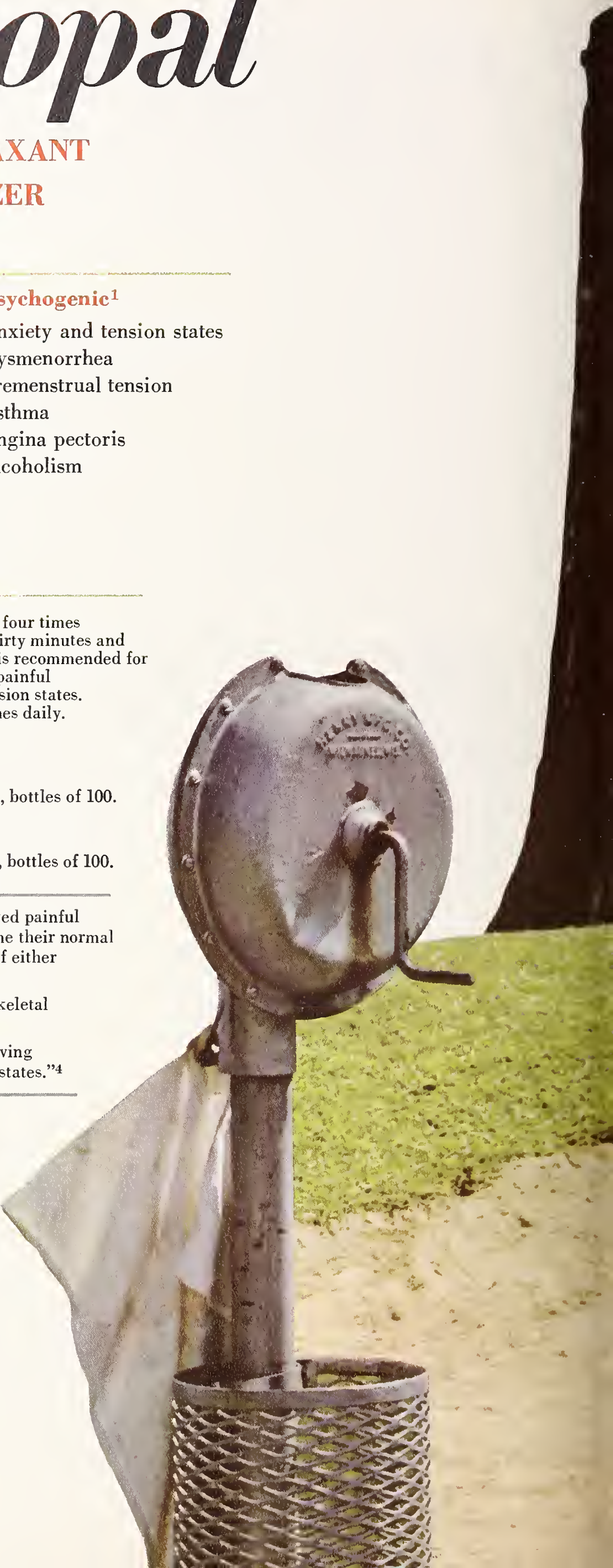
Trancopal (brand of chlormezanone) and Caplets, trademarks reg. U.S. Pat. Off. Printed in U.S.A. 9-59 (1400M)



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IRRITATION ***soothed*** by benzocaine—a topical anesthetic that promotes prolonged relief of inflamed or irritated tissues.

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Homarylamine · Bacitracin · Tyrothricin · Neomycin · Benzocaine

NEW PINEAPPLE FLAVOR Overwhelmingly selected by a taste panel.

Available to your patients on your prescription only.

DOSAGE: Three to five troches daily for three to five days.

SUPPLIED: Vials of 12.

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carries your patients through the middle of the night
outer layer
disintegrates rapidly to induce relaxation and sleep
inner core
sleep continues smoothly as inner core dissolves

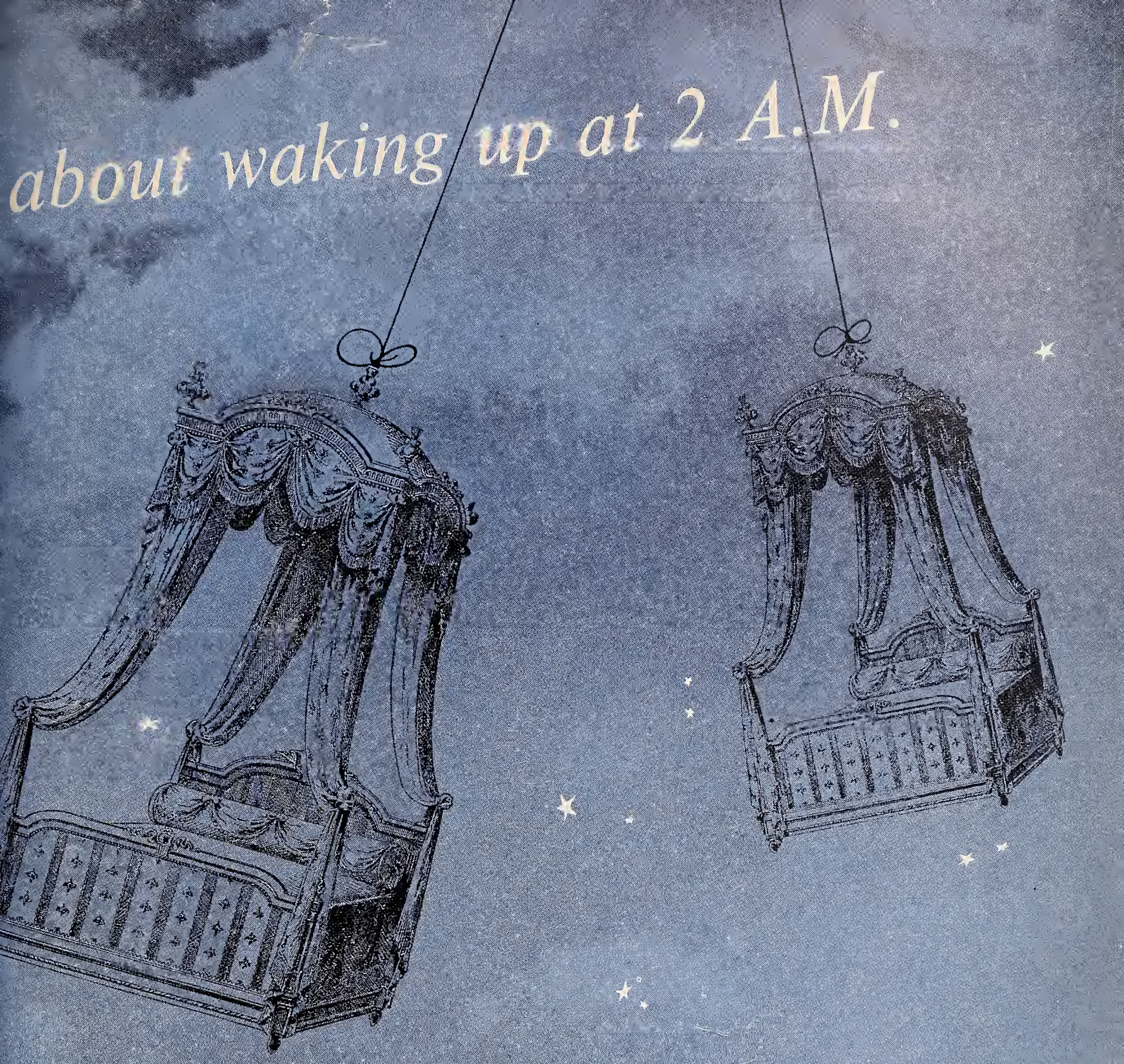
Each Nebralin timed-release tablet contains:

Dorsital* .... 90 mg.
Warning: May be habit forming

Mephenesin ....425 mg.
*Dorsey brand of pentobarbital

CAUTION: Federal law prohibits dispensing without prescription

Dosage: One or two tablets ½ hour before retiring.


about waking up at 2 A.M.

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timed-release tablet

timed-release action for a full night's sleep

NEBRALIN is designed to duplicate the normal sleep pattern. It encourages muscular relaxation and induces sustained, relaxed sleep by the release of Dorsital and mephenesin in a timed-release tablet. Rapid-acting mephenesin quickly relaxes skeletal muscles to overcome "fatigue-tension" and conditions the body for sleep. Dorsital provides CNS sedation to induce sound, relaxed sleep. The initial and sustaining dosages are designed to keep the amount of barbiturate to be inactivated at any one time at a low level tapering toward morning. Evidence indicates that mephenesin is capable of producing sleep,[1] and when combined with a barbiturate enhances barbiturate action.[2,3] Moreover, the integrated action of the two components permits smaller dosages of each,[4] assuring your patients refreshed awakenings without "morning hangover."

1 Schlesinger, E. B.: Tr. New York Acad. Sc. 2:6, (Nov.) 1948.
2 Richards, R. K., and Taylor, J. D.: Anesthesiology 17:414, 1956.
3 Shideman, F. E.: Postgrad. Med. 24:207, 1958.
4 Berger, F.: Pharmacol. Rev. 1:243, 1949.

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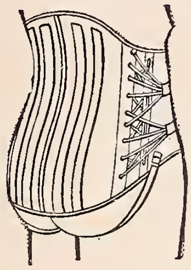

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CODEINE PHOSPHATE*

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Caffeine	gr.	½
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Acetophenetidin	gr.	2½
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Caffeine	gr.	½
Codeine Phosphate	gr.	½

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simple headache
rheumatic conditions
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tension headache
premenstrual tension
minor surgery
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relief of pain of all degrees of severity up to that which requires morphine

AND IN

fevers
dry, unproductive coughs

Your experience and trust throughout the years have established the wide use of the 'Empirin' family in medical practice—dependable analgesics for the effective relief of pain, fever, and cough—with safety.

THE RELIEF OF SYMPTOMS
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the disease of many masks

Doctor, do you recognize this patient? She complains of flatulence, constipation with alternating periods of diarrhea, and colicky pains in the lower right quadrant. At other times she is troubled by anorexia, lassitude, dull headache, muscle pains and backache. Or she may have only one or two of these symptoms.

In these puzzling cases, serious consideration should be given to intestinal amebiasis—the disease of many masks. Clinicians say it is "one of the most widespread and serious protozoan diseases of man," yet "there is no parasite more often misdiagnosed than is *E. histolytica.*" Conservative estimates place the incidence at 10% of the United States population as a whole, and 16% in southern states.

Now Glarubin, a relatively non-toxic amebicide, simplifies the treatment of suspected cases of intestinal amebiasis. Glarubin, a crystalline glycoside from the fruit of *Simarouba glauca*, is a specific amebicidal agent with minimal side effects. It contains no arsenic, bismuth or iodine.

Glarubin is administered orally in tablet form and does not require strict medical supervision or hospitalization. Extensive clinical trials prove it highly effective in intestinal amebiasis, and virtually free of toxicity.

Supplied in bottles of 40 tablets, each tablet containing 50 mg. of glaucarubin. Write for descriptive literature, bibliography, and dosage schedules.

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specific for intestinal amebiasis

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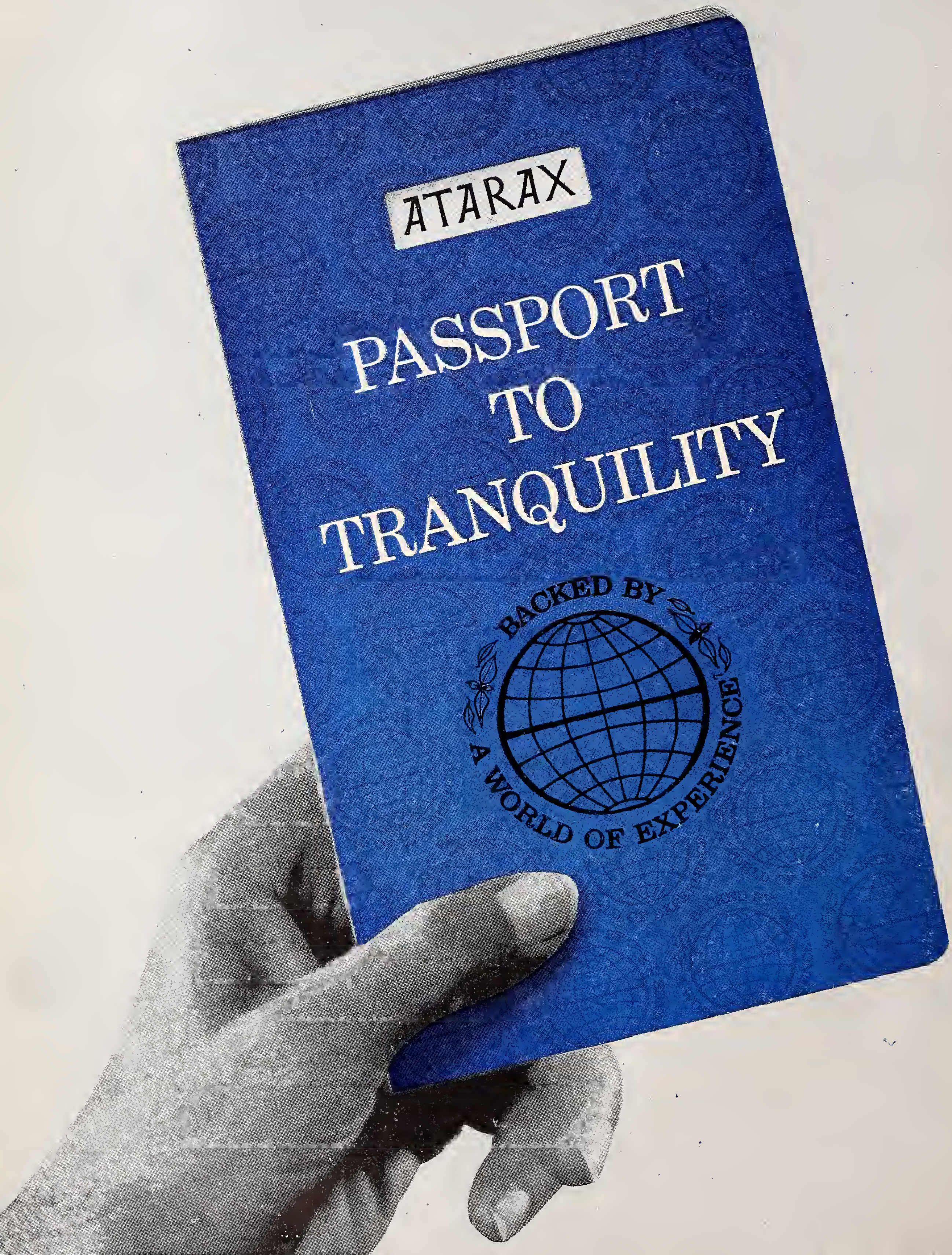
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PASSPORT
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☞ **a universal record of effectiveness**
In anxiety, tension and agitation, ATARAX "... produced a more favorable state of calm and tranquility than any drug previously used."[1]

☞ **widest latitude of safety and flexibility**
No serious adverse reaction ever documented – five dosage forms and sizes

☞ **chemically distinct among tranquilizers**
Not a phenothiazine or a meprobamate

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These unique benefits in specific indications

ANTIHISTAMINIC
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BACKED BY A WORLD OF EXPERIENCE[7]

Dosage: ADULTS, one 25 mg. tablet, or one tbsp. Syrup q.i.d. CHILDREN – 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d.
Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

References: 1. Farah, L.: Internat. Rec. Med. *169*:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. *7*:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. *169*:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. *38*:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. *53*:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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Neo-Synephrine® hydrochloride	5.0 mg.
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Dihydrocodeinone bitartrate	1.33 mg.
Potassium guaiacol sulfonate	70.0 mg.
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Bottles of 16 fl. oz.

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Lederle introduces a masterpiece of antibiotic design
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Strikingly enhances the traditional advantage of broad-spectrum antibiotics...

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*Activity level is a far more meaningful basis of comparison than quantitative blood levels, as Hirsch and Finland note. Action upon pathogens is the ultimate value.[1]

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The high level of DECLOMYCIN activity is uniquely sustained. It is not just an initial phenomenon but is constant — maintained on each day of treatment and between doses — without noticeable diminution of intensity. Peak-and-valley control is eliminated, favoring continuous suppression of pathogens and consequent improvement.

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DECLOMYCIN maintains significant antibacterial activity for one to two days after discontinuance of dosage[1]—a major distinction from other antibiotics. Previous drugs have declined abruptly in activity following withdrawal.

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1. Hirsch, H. A., and Finland, M.: Antibacterial Activity Of Serum Of Normal Subjects After Oral Doses of Demethylchlortetracycline, Chlortetracycline and Oxytetracycline. *New England J. Med.* 260:1099 (May 28) 1959. 2. Hirsch, H. A., Kunin, C. M., and Finland, M.: Demethylchlortetracycline – A New And More Stable Tetracycline Antibiotic That Yields Greater and More Sustained Antibacterial Activity. To be published. 3. Lichter, E. A., and Sobel, S.: The Distribution Of Oral Demethylchlortetracycline In Healthy Volunteers And In Patients Under Treatment For Various Infections. To be published. 4. Kunin, C. M., Dornbush, A. C. and Finland, M.: Distribution And Excretion Of Four Tetracycline Analogues In Normal Young Men. To be published. 5. Kunin, C. M., and Finland, M.: Demethylchlortetracycline: New Tetracycline Antibiotic That Yields Greater and More Sustained Antibacterial Capacity. *New England J. Med.* 259:999 (Nov. 28) 1958. 6. Sweeney, W. M.; Hardy, S. M.; Dornbush, A. C., and Ruegsegger, J. M.: Demethylchlortetracycline: A Clinical Comparison of A New Antibiotic with Chlortetracycline and Tetracycline. *Antibiotics & Chemotherapy* 9:13 (Jan.) 1959.

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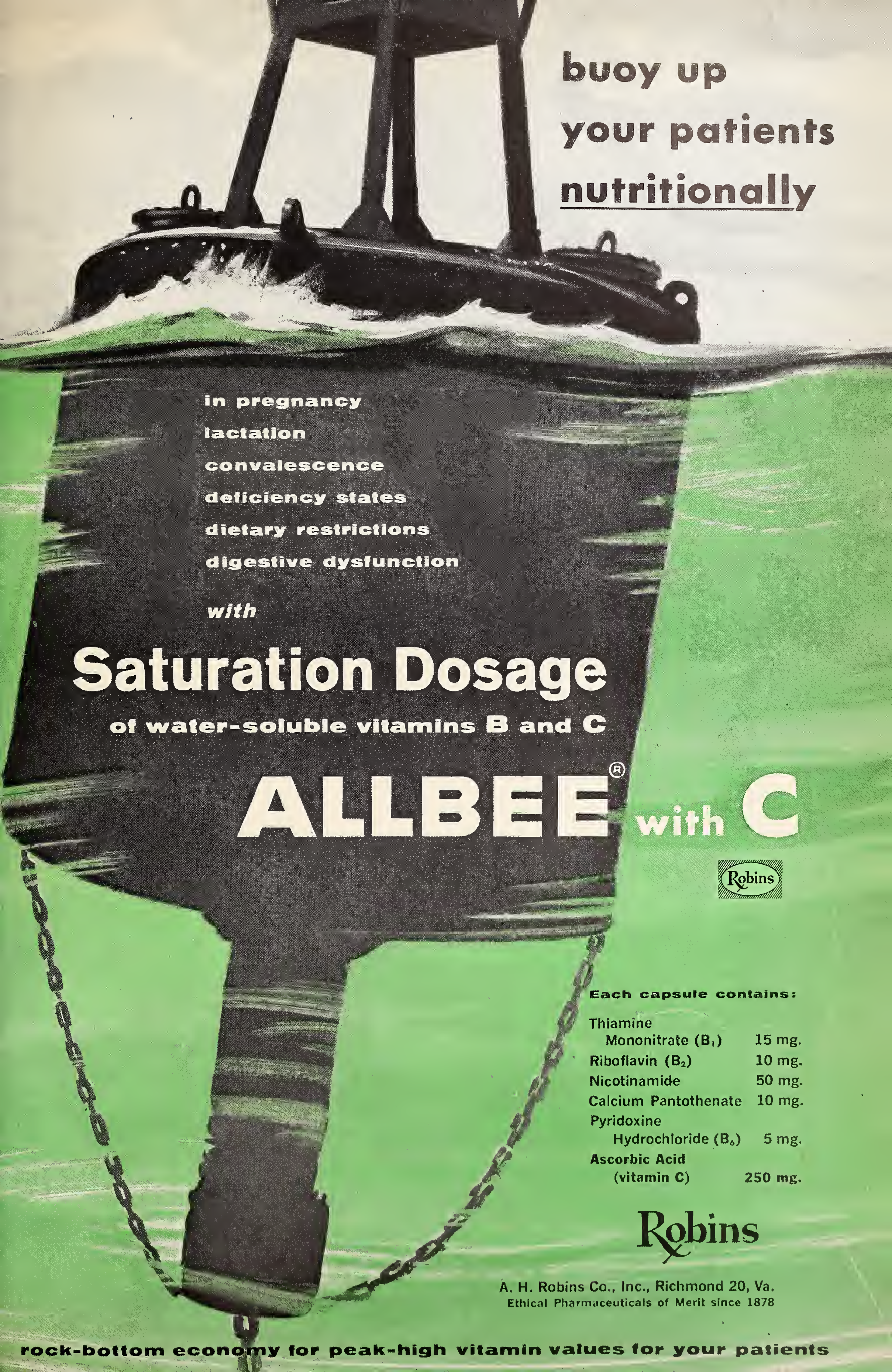

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in pregnancy
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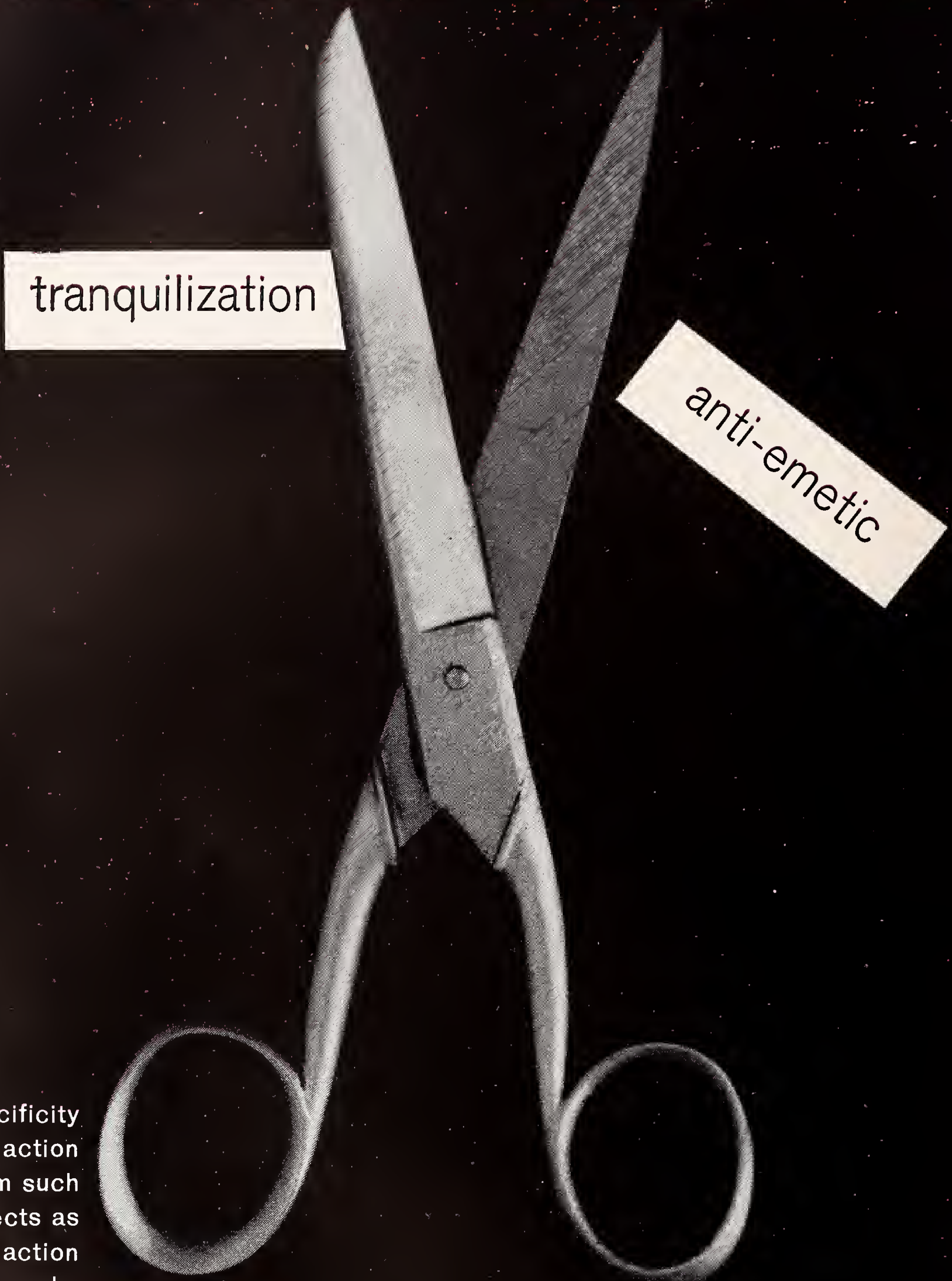


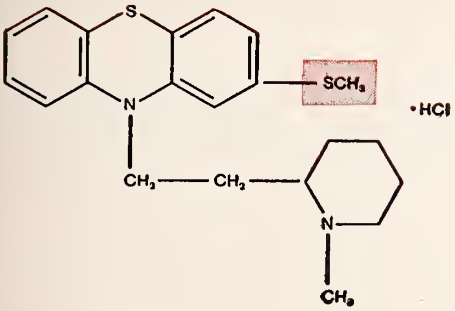
greater specificity
of tranquilizing action
—divorced from such
"diffuse" effects as
anti-emetic action
—explains why

Mellaril®
THIORIDAZINE HCl

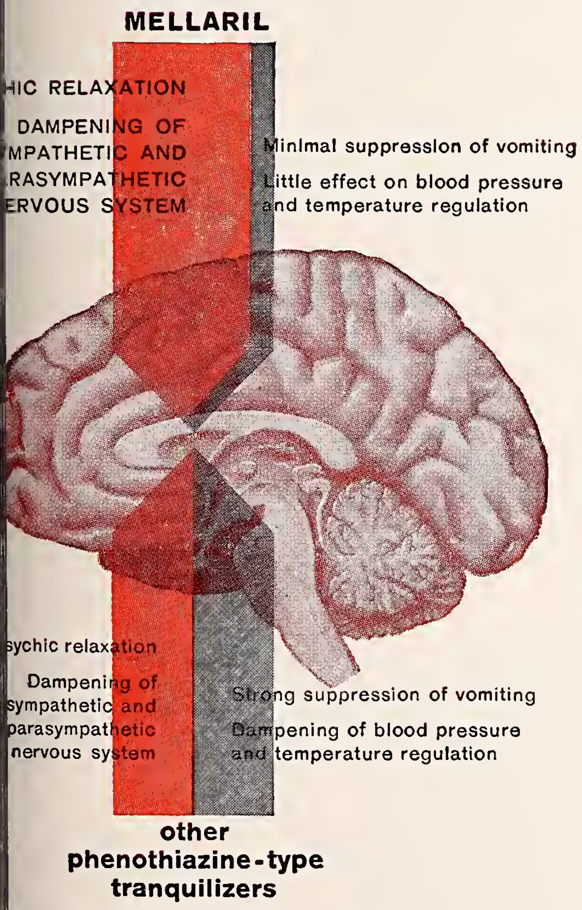
is virtually free of such toxic effects as · jaundice · Parkinsonism · blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines. . . . This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."*

ew advance in tranquilization:
eater specificity of tranquilizing action results in fewer side effects



The presence of a thiomethyl radical (S-CH_3) is unique in Mellaril and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
HIC RELAXATION
DAMPENING OF
MPATHETIC AND
RASYMPATHETIC
ERVOUS SYSTEM
Minimal suppression of vomiting
Little effect on blood pressure and temperature regulation
sychic relaxation
Dampening of sympathetic and parasympathetic nervous system
Strong suppression of vomiting
Dampening of blood pressure and temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.

2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy.

5 Virtual freedom from such toxic effects as jaundice, photosensitivity, skin eruptions, blood forming disorders.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
ADULTS: Mental and Emotional Disturbances:		
MILD — where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE — where agitation exists in psychoneuroses, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE — in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
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Bagnall, A. W. (Univ. British Columbia, Vancouver, B.C.): A.M.A. Clinical Meeting (Scientific Section, Exhibit No. 124), Minneapolis, Minnesota, Dec. 2-5, 1958.

e 4-aminoquinoline drugs (Plaquenil and
en) together with supplemental agents ad-
stered in nontoxic doses effectively maintained
ression of the disease in 83 per cent of 194
nts followed for 18 months."

Scherbel, A. L.; Harrison, J. W., and Atdjian, Martin: Cleveland Clin. Quart. *25:95, April, 1958.*

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it period of time, there appears to be a tre-
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Cramer, Quentin (Kansas City): Missouri Med. *55:1203, Nov., 1958.*

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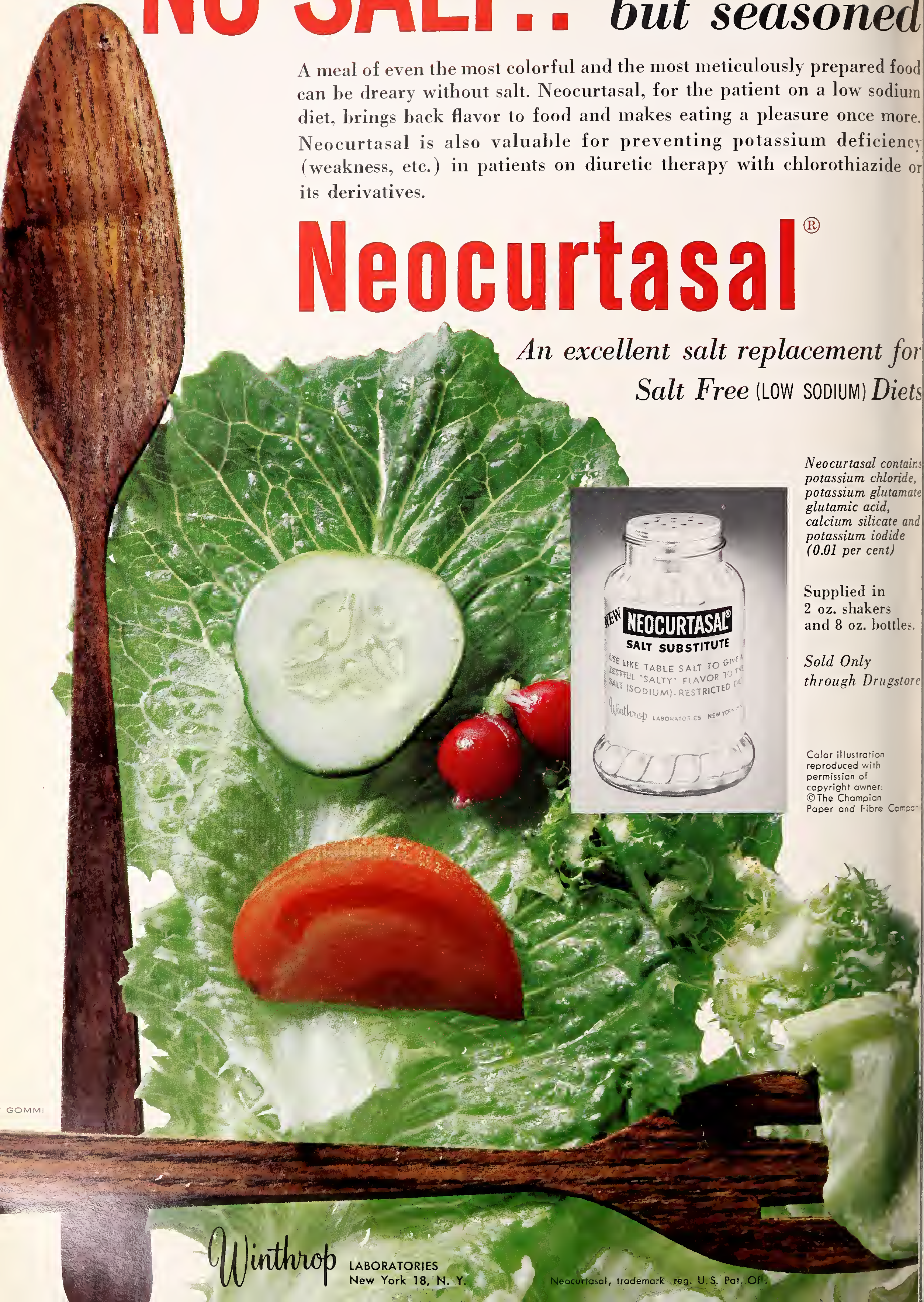
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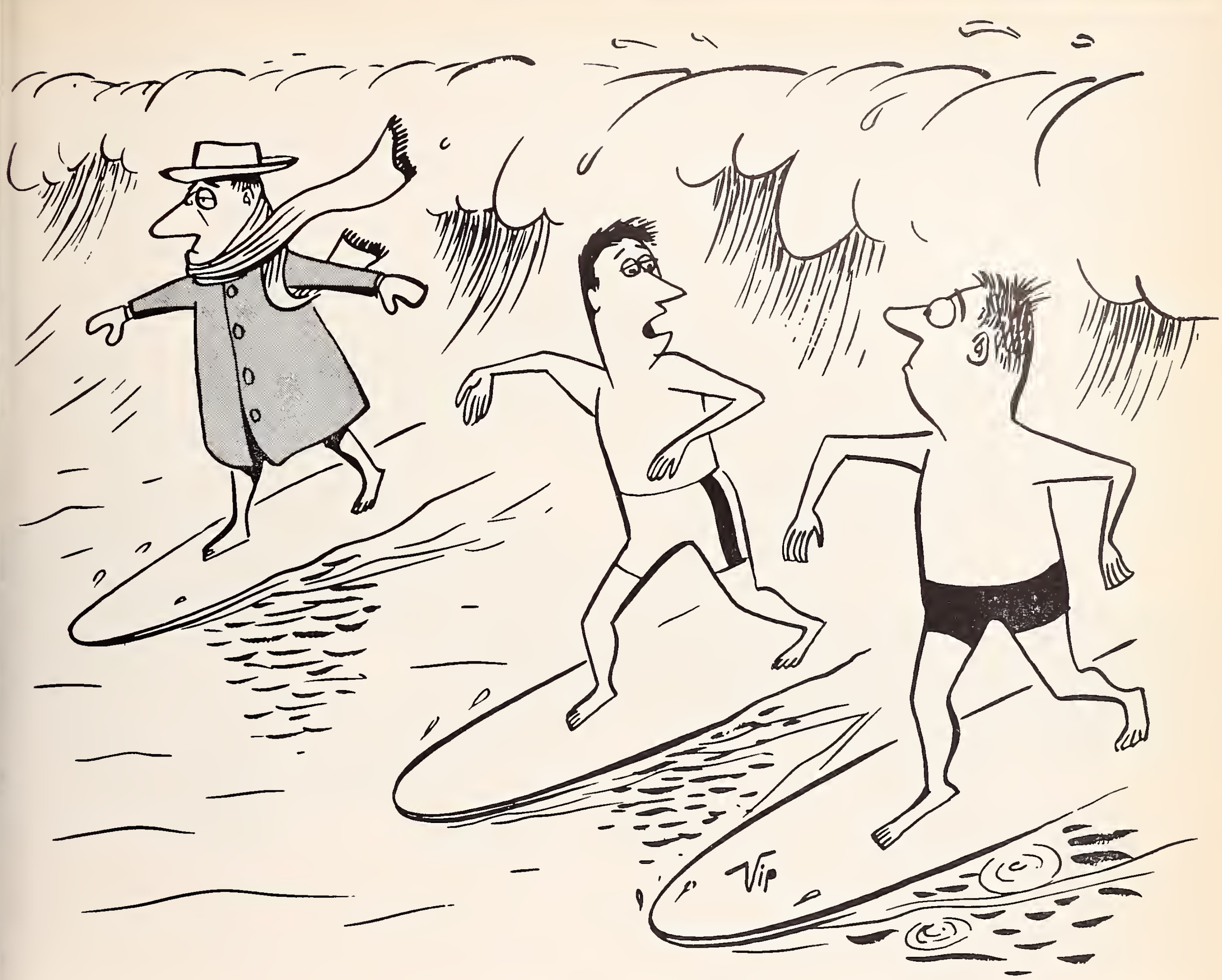

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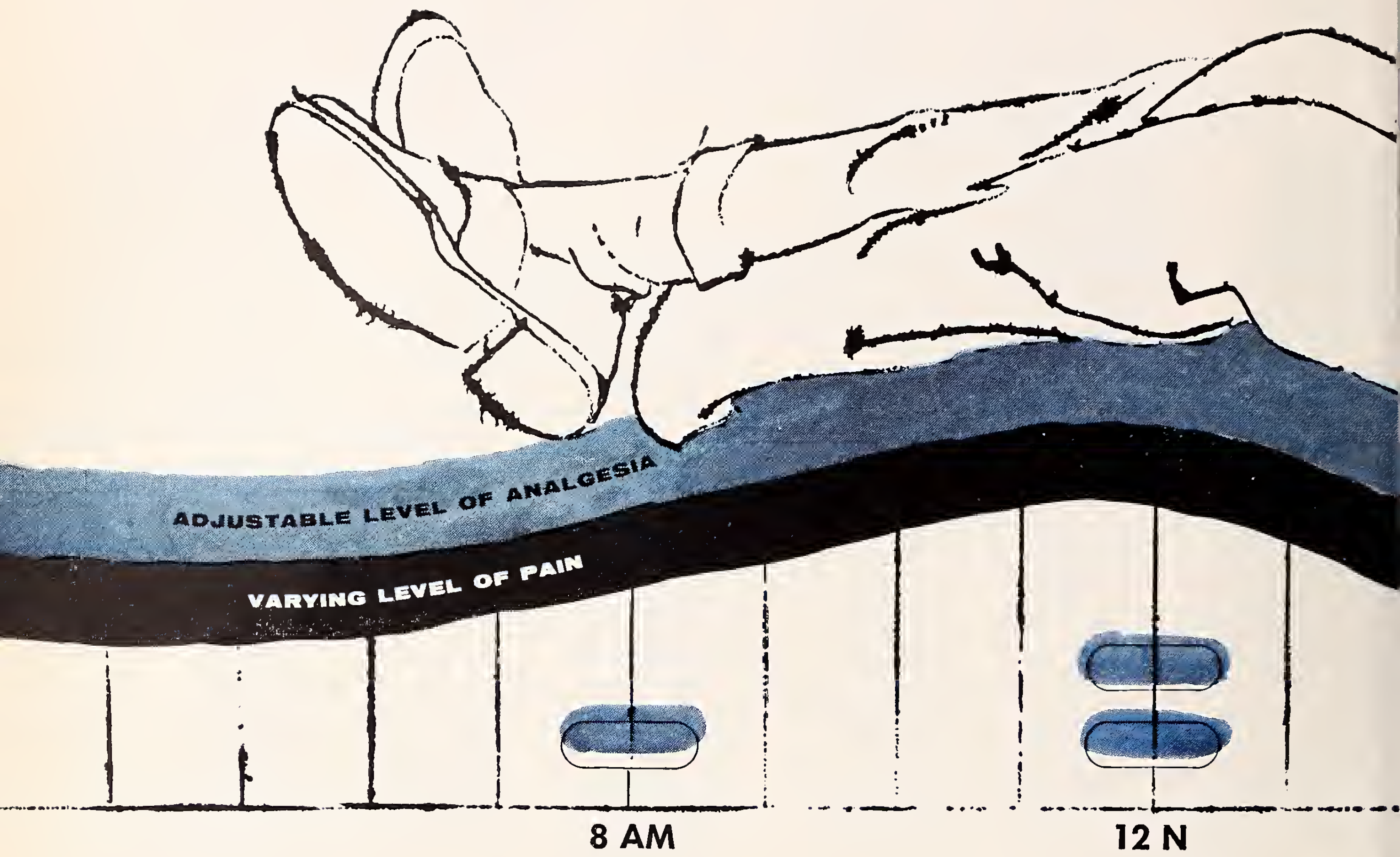

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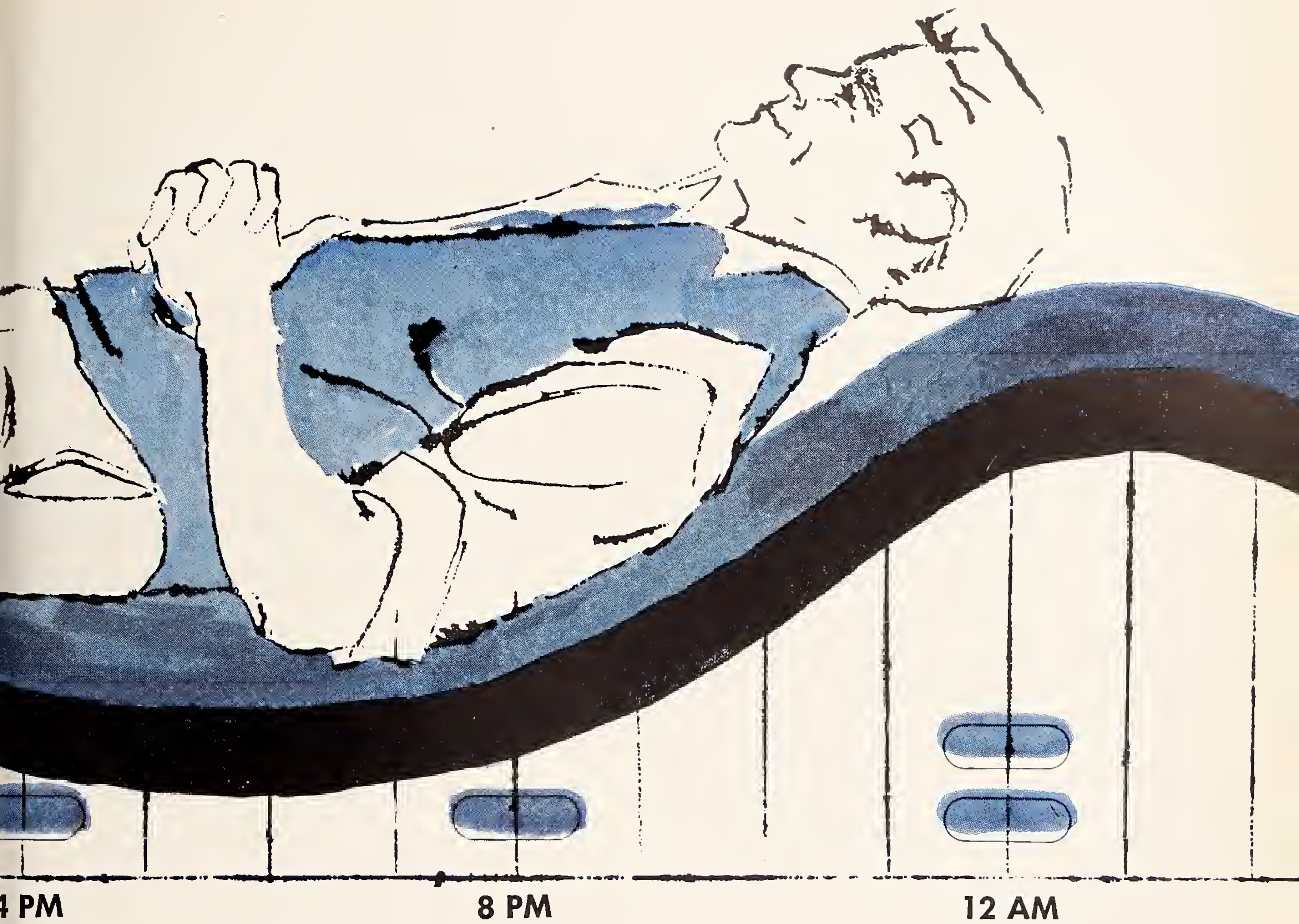

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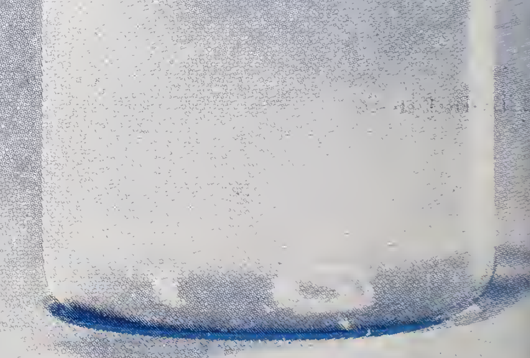

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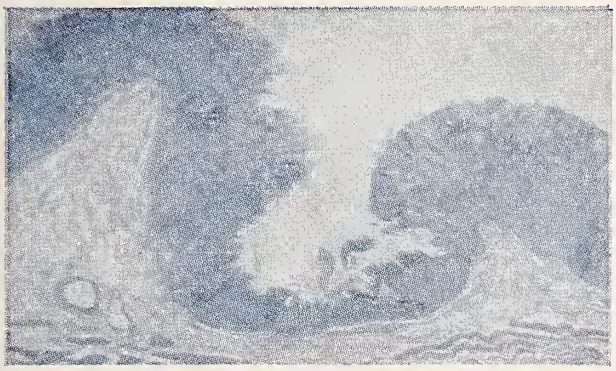
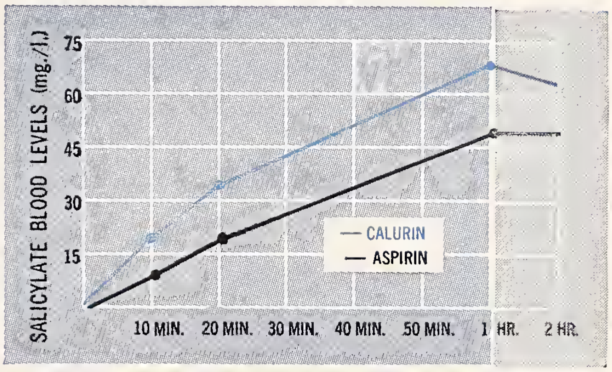


Particle-induced ulceration — section through lesion found in gastrectomy specimen. An aspirin particle was found firmly imbedded in this undermined erosion. Such lesions may be associated with the relative insolubility of aspirin, which remains in particulate form after dispersion in gastric contents.



Calurin, being freely soluble, is promptly available for absorption into the systemic circulation. Salicylate blood levels in 12 subjects receiving both Calurin and plain aspirin were found to rise more than twice as high within ten minutes following Calurin. Also, these levels persisted higher for at least two hours.[11]

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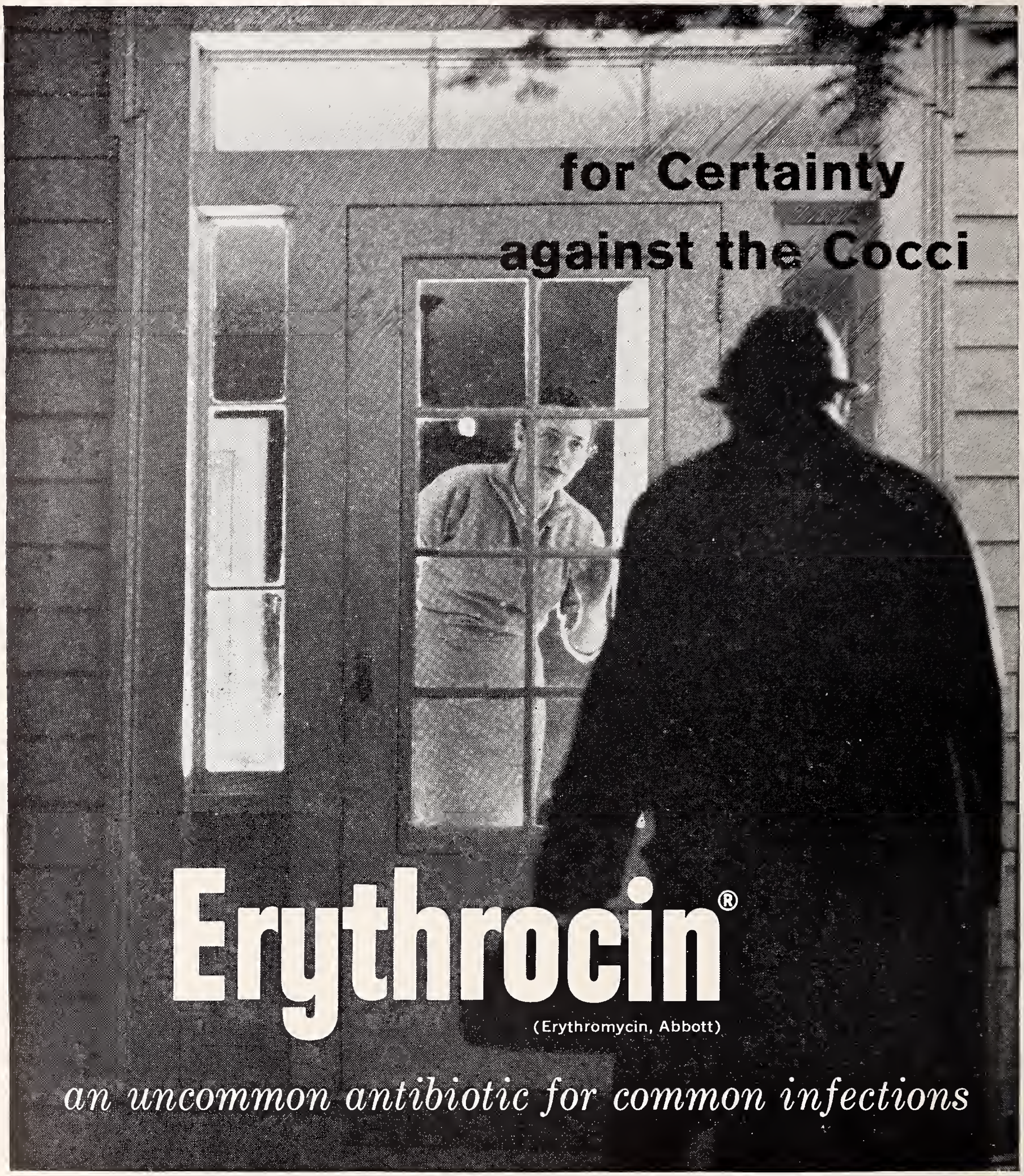

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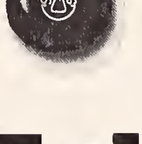

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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 11 NOVEMBER, 1959

Original Articles

CANCER OF THE BREAST[**]

By Vincent P. Collins, M.D.[*]
and
Isabell T. David, R.N.[*]
Houston, Texas

OCCUPYING the clean-up position, according to legend, was a task for Hercules. It is appropriate that a radiotherapist should take care of this function for a panel on breast cancer.

Over the past 10 years there have been approximately 2,500 articles published on breast cancer and this means almost 2,500 different opinions. Among these varied opinions is that of Dr. Taylor(11), eminent surgeon in breast cancer at Massachusettes General Hospital: "We have been unable to establish that prophylactic irradiation has improved the results of operation, or has decreased or deferred the appearance of operative field recurrences."

Another view is expressed by McWhirter(9), radiotherapist at Royal Infirmary, Edingurgh: ". . . more relastic survival rates reveal clearly that radical mastectomy alone fails in a very high proportion of cases."

Every cancer therapist defends his favorite method of treatment because it produces the best survival rates. Yet, the three principal treatment policies, i.e., radical mastectomy, radical mastectomy combined with radiotherapy, and simple mastectomy with postoperative radiation, all produce five-year survival rates of 40 to 50 per cent. (Table I)

Different interpretations might be placed on this similarity of survival rates; it might indicate that all treatment policies are equally effective, or that all are equally ineffective.

The similarity goes further in that over the years there has been consistent and comparable improvement in survival rates reported by every institution. (Table II)

While this suggests that effect of treatment is constantly improving, it is surprising that mortality rates remain unchanged. (Table III)

In spite of differences of interpretation, a vein of consistency is found in these seeming contradictions. This comes to light following Handley's investigation of the incidence of metastases to internal mammary lymph nodes(6). In about 33 per cent of operable cases, disease had spread beyond the operative area, thus accounting for one-third of the failures of radical mastectomy. There were two reactions to this information. Urban(12) and Wangensteen(13) undertook more radical surgery, dissecting the internal mammary chain or even the supraclavicular region. McDonald, Haagenson and Stout(8) adopted the conservative approach of the triple biopsy; if metastases are found in the supra clavicular or internal mammary regions, the patient is not eligible for radical mastectomy.

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[*] From the Department of Radiology, Baylor University College of Medicine, Houston, Texas.

[**] Presented at the Sixth Annual Cancer Seminar of the Arizona Division, American Cancer Society, Tucson, Ariz., Jan. 25, 1959.

Additional occult metastases would certainly be revealed if other pathways of dissemination of disease could be explored as carefully as the internal mammary region. These include venous pathways to Batson's plexus (direct venous route to vertebrae), epigastric lymph nodes (pathway to liver), intercostal lymphatics (leading to posterior mediastinum) as well as routes to opposite breast and axilla. Considering the possible circle of dissemination, even the super-radical mastectomy would be too conservative to remove all the lymphatic drainage fields and at the same time, too radical in view of the small chance of complete extirpation of cancer. If such metastases exist, then treatment with intent to cure cannot succeed. But there are other goals

TABLE I

SURVIVAL RATES FOR THREE DIFFERENT TREATMENT POLICIES

Treatment Policy	*Absolute Survival Rate* 5 years	10 years
(a) Radical mastectomy	47.9 per cent of 668 patients	33.4 per cent*
(b) Radical mastectomy with pre and postoperative radiotherapy	40.1 per cent of 1,042 patients	23.4 per cent of 154 patients
(c) Simple mastectomy with radiotherapy	42.0 per cent of 1,606 patients	25.0 per cent of 226 patients

(a) Haagensen, C. D.(4), Presbyterian Hospital, New York.
(b) Nohrman, B.A.(10), Radiumhemmet, Stockholm.
(c) McWhirter, R.(9), Royal Infirmatory, Edinburgh.
*Personal communication with Dr. C. D. Haagensen indicates that he has an unpublished value of 33.4 per cent for 10-year survivals.

TABLE II

IMPROVEMENT IN SURVIVAL RATES

Author and Years	*No. of Cases*	*Radical Mastectomy*	*Per Cent Five-Year Survival (Relative)*
Haagensen (4, 5)			
1915-1934	1,040	640	41.3 (264)
1935-1942	668*	495	58.2 (288)
Harrington (7)			
1910-1914		517	39.7 (205)
1940-1944		1,476	62.4 (921)
Taylor** (11)			
1918-1920		100	30.0
1936-1941		430	51.0
Adair*** (1)			
1935	300		34.0
1942	506		46.0

*Primary cases only.
**Clinical cures.
***Determinate gorup.

TABLE III

INCREASE IN MORTALITY IN CANCER OF THE BREAST (2)

Year	*Total Deaths*	*Total Increase*	*Percentage Increase*	*Expected Per Cent Increase Due to Population Change*	*Other Factors (Per Cent)*
1933	12,316				
		6,612	53.7	41.2	12.5
1948	18,928				

of treatment and these may become evident upon careful scrutiny of the possible results of treatment.

RESULTS OF TREATMENT

(At any interval, however short or long after treatment)

1. No evidence of disease.

This patient is clinically cured for one of two reasons:

(1) the lesion was, in fact, totally removed, or (2) the lesion has grown so slowly that sufficient time has not elapsed for persistence to become manifest.

2. Local recurrence only.

This is directly attributable to failure of the treatment method, but improvement in technique of treatment might change local failure to total success for the next patient.

3. Local recurrence and distant metastases.

In this patient, failure to cure may well have been due to dissemination prior to treatment, but obviously, treatment failed to achieve its purpose in the region to which it was applied.

4. Distant metastases only.

The site of primary disease in this patient remains free of disease and distant metastases is assumed to have occurred before treatment.

Survival statistics deal only with cured or surviving patients and overlook valuable information found in patients who are uncured or do not survive.

In an analysis of approximately 1,000 patients with cancer of the breast, 648 were treated by radical mastectomy and of this group, 507 were not cured. The pattern of first recurrence for this group of patients is given in Table IV.

In 134 patients the first recurrence was in the operative field, (109 on the chest wall and 25 in the axilla). For this group, representing 25 per cent of operated patients, it is evident that primary treatment failed to accomplish its immediate and possible goal of control of disease in the treated area. It is possible that some of these patients had occult distant metastases before operation, but later distant metastases might be ascribed to dissemination from local recurrence.

Of the group of uncured patients, it was possible to follow 425 until the time of death. Among these, 255 (66 per cent) had no evidence of local recurrence. This is direct evidence of the effectiveness of radical mastectomy. It suggests that there is an objective standard for comparative evaluation of the effectiveness of

TABLE IV

PATTERN OF FIRST RECURRENCE IN 507 PATIENTS TREATED BY RADICAL MASTECTOMY WHO WERE NOT CURED

Site of First Recurrence	*No. of Patients*	*Approx. Per Cent*	*Comment*	
Lymph nodes	136	25	Operated side—	
			Supravlavicular	79
			Axilla	25
			Opposite side—	
			Axilla	25
			Supraciavicular	6
			Other areas—	
			Retroperitoneal, Cervical, etc.	11
Skin, chest wall operated side	109	20		
Bone	106	20	Spine	61
			Other bones	45
Lung and pleura	73	15		
Opposite breast	44	10		
Liver				
Other distant sites,	17	5		
CNS, skin, etc.	12	5		

different methods of treatment and in different hands. Among patients dying of breast cancer, a control rate of more than, or less than 60 per cent would indicate the role of more radical surgery, of more conservative surgery and of surgery combined with radiotherapy.

SUMMARY

1. The primary treatment of breast cancer, whether surgical or radiological, exerts its effect in the area to which it is applied.

2. Local control or eradication of cancer in the primary treatment area may not effect cure or influence survival, but failure to achieve local control does mean failure to cure.

3. When the first recurrence is in a distant site, or when the patient dies of cancer with no recurrence in the treated area, metastases may reasonably be assumed to have occurred prior to treatment.

4. Uncured patients, having distant metastases but no recurrence in the treated primary site, offer the most direct evidence of efficacy of treatment.

5. In this series, the only way in which the course of uncured breast cancer could have been altered by the primary treatment would be to have increased the percentage controlled in the operative site.

6. The comparative value of different treatment techniques and different treatment policies is obscured by analysis in terms of cure rate or survival rates.

7. Cure rates and survival rates indicate only that, throughout the world, approximately 40 per cent of breast cancers either grow locally and can be completely removed, or grow so slowly that more than five years are required for recurrence to become manifest.

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RADIOTHERAPY OF INOPERABLE CARCINOMA OF THE LUNG*

By Arthur Purdy Stout, M.D.
New York, N. Y.

THIS is a preliminary and incomplete study of the results of radiotherapy of inoperable carcinoma of the lung in an attempt to learn its value and some of the reasons for its failure. It is based chiefly upon an autopsy study of 20 cases at the Francis Delafield Hospital from among 144 patients with inoperable lung cancer treated by supervoltage therapy either with the 2 MEV X-ray machine or the cobalt bomb and five additional cases studied at autopsy at the Halloran VA Hospital treated with a 250 volt X-ray machine. I am indebted to Dr. Ruth Guttman, radiotherapist, and Dr. Edith Sproul, pathologist, for the information from the Francis Delafield Hospital and to Dr. Oscar Auerbach, pathologist of the East Orange VA Hospital, for autopsy information from the Halloran hospital.

As all know, the inoperable lung carcinoma case is far from a favorable subject for treatment of any kind and it is not surprising to learn that of the 144 patients 96 died in less than one year after treatment. Of the 48 who lived more than one year, 14 survived at two years, four were alive four years, and one lived five years. An analysis of the 20 autopsy cases should give one a clue to the causes of death and the effect of the radiation upon the tumor.

In the first table are shown the sex and age distribution. The machines used, tumor dose and duration of treatment are also shown. One case died before the full course of treatment. He received only 2,600 *r* in a two weeks period.

The second table shows the duration of life following treatment. It corresponds very well with the results for the total number of patients treated. In the autopsy series, 60 per cent died in less than one year, while for the total group of 144 cases, 67 per cent died in less than one year.

The third table shows the different types of carcinoma found among the 20 cases, and the average duration of life after treatment in each group. I do not think these figures are of any significance because the numbers in each division are so small.

The fourth table shows the results of treatment from a clinical and radiological point of view. It will be seen that eight cases were stated to have some clinical improvement, but of these only three also showed x-ray improvement. Five of the remaining 12 showed no clinical improvement, although two of these had a diminution of the size of the tumor by x-ray. The remaining seven were clinically worse after treatment, even though two of them seemed to have x-ray improvement.

TABLE I
20 INOPERABLE CARCINOMAS OF LUNG TREATED BY RADIOTHERAPY

Male 18	Female 2

Ages

38 - 40	41 - 49	50 - 59	60 - 69	70 - 76
1	4	7	4	4

Treated with 2 MEV — 17; with cobalt — 3.
Tumor dose 6,000 r (5); 5,000 r (10); 4,000 r (4); 2,600 r (1).
Duration of treatment: four to eight weeks.

TABLE II
20 INOPERABLE CARCINOMAS OF LUNG DURATION OF LIFE IN MONTHS AFTER CESSATION OF TREATMENT

Francis Delafield Hospital

0 - 5	6 - 11	12 - 17	18 - 23	25
8	4	4	2	2

TABLE III
20 INOPERABLE CARCINOMAS OF LUNG AVERAGE DURATION OF LIFE AFTER CESSATION OF TREATMENT

According to Tumor Type
Francis Delafield Hospital

Tumor Type	*Cases*	*Duration (Mos.)*
Squamous	10	11⅓
Glandular	4	6¼
Undifferentiated	4	10½
Giant cell	1	0
Mesothelioma	1	8

TABLE IV
20 INOPERABLE CARCINOMAS OF LUNG EFFECT OF RADIOTHERAPY

Francis Delafield Hospital

Improvement both clinical and x-ray	3
Clinical improvement but no x-ray effect	3
Clinical improvement; worse by x-ray	1
Clinical improvement; x-ray effect ?	1
No clinical improvement; x-ray improvement	2
No clinical or x-ray improvement	3
Worse clinically but x-ray improvement	2
Worse clinically; no x-ray effect	3
Worse clinically and by x-ray	2

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*Presented at Washington University Medical School, Sept. 12, 1957.

TABLE V

20 INOPERABLE CARCINOMAS OF LUNG TREATED BY RADIOTHERAPY

Francis Delafield Hospital

Principal Causes of Death

Respiratory Insufficiency	12
Hemopericardium	2
Broncho-esophageal fistula	1
Obstruction of superior vena cava	1
Intestinal obstruction (metastasis)	1
Adrenal insufficiency (metastasis)	1
Ureteral obstruction	1
Cachexia	1

In the final table are listed the principal causes of death of the 20 cases so far as could be determined at autopsy. Nine of the 12 patients who are listed as having respiratory insufficiency had some degree of interstitial fibrosis which we presumed was induced by the radiotherapy. Many also had extensive tumors and bronchial infection. It is almost impossible to determine how great a part the interstitial fibrosis played in producing fatal respiratory insufficiency, but there is good reason to suppose that often it was a dominant factor. This will be demonstrated when I refer to the cases treated at the Halloran VA Hospital. Except for the case of the old woman who died of cachexia without metastases, all of the other principal causes of death were induced by metastases. I would like to point out that all of the autopsies in this group were done or supervised by Dr. Edith Sproul, and the interpretations are hers. I have reviewed all of the slides and am in complete agreement with her interpretations.

In two of the cases, radiotherapy seemed to have effected a complete destruction of the tumor. I should like to report these in more detail.

Case Three was a 76 year old woman. She had a positive bronchial biopsy that showed undifferentiated carcinoma. At exploration a 3 cm. tumor was found in the RLL and a 5 cm. mass was observed outside of the lung adjacent to the pericardium. She received 5,000 *r* through two opposing ports with the 2 MEV machine in 4½ weeks. Weight loss and anemia progressed with radiotherapy. Hypercalcemia, cachexia and emaciation were marked and she died 2½ months after cessation of radiotherapy. At autopsy only cicatricial tissue was found in the lung and attached to the pericardium. There were no metastases, but as a chance finding there was a small reticulum cell sarcoma in the spleen.

Case 15. A 54 year old male. He had a squamous cell carcinoma of the right main stem bronchus confirmed by biopsy. Because of emphysema and a poor heart, he was considered inoperable. During a five week period he received 5,000 *r* tumor dose from the 2 MEV machine. He died 16 months after cessation of treatment with radiation fibrosis emphysema and persistent infection in the lung. No tumor cells were found in the lung or elsewhere.

A third case showed extensive tumor destruction and might have been cured had the patient been able to tolerate a full course of treatment.

Case 11. Male, 49. Before coming to the Francis Delafield Hospital, this patient had had a right upper lobe lobectomy for a squamous cell carcinoma involving the apex of the lobe with a Horner's syndrome. The tumor had recurred. The man was treated with a 2,600 *r* tumor dose with the 2 MEV machine in a period of two weeks. This resulted in pneumonia with high fever with no evidence of effect on the tumor by x-ray. Treatment was stopped and in two weeks he was dead. At autopsy the region treated showed scar tissue in which were only occasional giant tumor cells with pyknotic nuclei and cytoplasmic vacuoles. No undamaged tumor cells were found and no metastases. The probable cause of death was pneumonia.

It has been the rule at the Delafield Hospital to limit the tumor dose to a maximum of 6,000 *r*, and none of the 144 patients with inoperable lung cancer treated at that hospital received a higher dose. At the former Halloran VA Hospital on Staten Island, the plan of treatment was influenced by the regional consultant in radiotherapy who was a believer in the efficacy of very large tumor doses. The five patients with inoperable lung cancer who were autopsied had received tumor doses varying from 4,986 *r* to 9,679 *r*. Four of them received doses over 6,000 *r*. Treatment was from a standard 250 KV machine given through 12 ports during periods ranging from 4½ to 10 weeks. There was no clinical improvement and death occurred in periods from three weeks to four months after cessation of treatment. In every case there was very marked pulmonary fibrosis which Dr. Auerbach interpreted as having been induced by the radiotherapy. This was the principal cause of death in four patients; in the fifth it was presumed to be cerebral metastases. In two patients with multiple metastases, there was little radiation effect. In the other three with only regional node metastases, the effect was very marked but in no case was the tumor completely destroyed.

It seems to me fair to assume from these findings that there is no indication that the higher tumor doses at Halloran Hospital accomplished any useful purpose; rather they were harmful, for none of the five patients lived more than four months after cessation of treatment, none was clinically improved, and in no case was all of the tumor destroyed. The Delafield Hospital results, while not brilliant, at least seemed to have accomplished temporary symptomatic amelioration in 40 per cent, and in two patients a possible cure was effected because no trace of tumor could be found at autopsy. It seems impossible to be sure whether or not treatment lengthened life, but certainly in most instances it was not shortened. We are encouraged to continue the treatment of inoperable lung carcinoma at the Francis Delafield Hospital by high voltage radiotherapy limiting the tumor dose to a maximum of 6,000 *r*.

CARCINOMA OF THE BREAST IN A PRIVATE PRACTICE

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THIS DISCUSSION of mammary carcinoma is based on our experience in private practice since 1944, which means that we are just now in a position to make some early estimates of end results. For the past 11 years the two authors of this article have been associated in practice, and for some five years past we have had the help of a junior associate. No promise is made that this discussion will be orderly or sequential, in fact much of it will be desultory and even anecdotal, but the sum of knowledge concerning any disease, and the individual's skill, whatever it may be in the management of a disease, is more the result of individual experience with individual patients than "book learning."

From 1944 to 1955 a total of 604 cases of cancer of the breast have been seen in this practice, of which only 284 have been treated definitively by radical mastectomy. The reason for this will become obvious when I remind you that we pursue the odd specialty of cancer therapy, and thus attract a disproportionate number of patients with recurrence and metastasis following definitive treatment elsewhere. Thirty-five patients had primary disease on admission which was technically operable, but considered by us as biologically inoperable. Of patients previously treated for primary disease, 48 were seen as problems in local recurrence, 151 were first seen with disseminated disease, while 86 were seen only in consultation.

I do not think that anything will be added to your understanding of carcinoma of the breast by my presenting the usual tabular outlines of our achievements in the definitive treatment of primary disease. Briefly, of the cases with disease limited to the breast, or Stage I, and treated by radical mastectomy, 82 per cent survived five years. Compared to reports in the literature in the last 20 years, this level of survival at five years is among the better results, but we are sure that this figure is higher than average for one reason, if nothing else — an attempt has been made to separate out the biologically unfavorable cases, even in Stage I, where they may be recognized by a history of rapid growth and by such physical signs as edema and erythema of skin overlying the tumor. Even more important is the separation of such biologically ominous cases in Stage II, where the disease may be entirely operable from a technical standpoint but where, in our opinion, the combination of local signs referred to just above, with a history of relatively rapid growth and axillary nodes which may be miliary in size but diffuse and extending to the apical area, or over 2 cm. in diameter, or fused to each other or to the skin — this is the sort of evidence which to us spells out the warning that surgical management may actually be harmful.

Our division of Stage II is both by anatomical extent of the disease and by evidence of unfavorable biologic characteristics. Thus, Stage II A includes patients who had no apical axillary nodal involvement, nodes less than 2 cm. in diameter, and who lacked the unfavorable criteria recited in the previous paragraph. Practically all of these were operated upon forthwith, employing, as we have continued to do, a standard radical mastectomy, and at five years the survival rate is 55.8 per cent.* In Stage II B cases, so classified either because of a greater extent or bulk of disease or the presence of unfavorable signs of growth potential, some of the cases were nevertheless operated upon, with a five-year survival of only 19.4 per cent. The senior author prefers to apply the test of sensitivity to a moderate dose of irradiation for Stage II B cases; those patients showing distinct regression of the primary lesion with a tumor dose of 1500 to 1800 roentgens, delivered in a period of two to two and one-half weeks, are regarded as radiosensitive, and therefore incurable and inoperable, and in these women a full course of irradiation was given; the five-year survival of those treated by irradiation was 31.6 per cent. When such a test of irradiation showed radioresistance, radical mastectomy was then done without any delay required, due to the modest amount of irradiation, and the five-year results were statistically the same as the group of II B cases indicated earlier, or about a 20 per cent five-year survival.

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*Here, and throughout, reference to end results by stage means only those cases in whom axillary nodal involvement has been confirmed by microscopic examination.

Although ignored by almost everyone, the comparative five-year survival of 20 per cent for radioresistant cases coming to radical mastectomy, and over 30 per cent for radiosensitive lesions treated definitively by irradiation, provides highly suggestive evidence that the test of radiosensitivity is a valuable method of separation of two biologic groups, one of which will fare much better if surgical treatment is withheld and replaced by a thorough course of irradiation.

Recurrence Rate

Our local recurrence rate is 5.3 per cent, meaning that recurrence of cancer in the operative field of a radical mastectomy after five or more years of observation has a frequency of only 5.3 per cent. This compares to rates of local recurrence as reported in the literature more often from 10 per cent to as high as 25 per cent. Even Haagensen reports a rate of local recurrence of some 13 per cent, and it seems to us that this figure in itself is a denial of the importance which Haagensen ascribes to long operative time, in which both patient and surgeon are required to withstand procedures of five to six hours in duration. We understand that a wag who once was a resident on Haagensen's service remarked that the high rate of recurrence was undoubtedly due to the fact that the cancer had a chance to recur before the end of the operation. We do not suggest for a moment that our low recurrence rate is due to any superiority in surgical technique. We do insist on performance of the standard radical operation, with skin flaps which are cut thin only in the immediate area of the neoplasm, but otherwise are reflected as widely as was advocated by Halstead, and we perform an adequate axillary dissection, with removal of the sheath of the axillary vein. The operative procedure in our hands may require one and one-half hours in a thin subject, to as long as three and a half hours in an obese woman whose axilla is difficult to dissect. In part, our favorable rate of local recurrence is due to some of the biologically unfavorable cases having been filtered out and denied the very doubtful advantages of radical surgery. In these women there is often widespread superficial dissemination throughout the local lymphatics, and no matter how thin the skin flap is cut, and for how wide an area, nor how routine the grafting, these patients will develop early local recurrences. We employed skin grafts in only eight out of 284 radical mastectomies; this is not because we have removed a skimpy amount of skin over the breast, but because we prefer to employ sliding flaps from the adjacent chest wall or epigastric area, on the theory that the skin which belongs in this area does a better job of covering the defect, especially when it is a thick sliding flap.

New Method of Management

One feature which has little to do with end results is our development of a new method in the management of the wound after operation. Well over three years ago, we became convinced that surgeons have been doing the wrong thing for centuries by carefully covering fresh surgical wounds and, even worse, employing an occlusive pressure dressing. The net result is the provision of an ideal environment for bacterial growth, characterized by warmth, moisture, an ideal culture medium in the form of serous exudate, low oxygen tension, and even darkness. By leaving wounds completely exposed, a reverse situation is established, where the most ambitious bacterium is effectively discouraged in growth and propagation by dryness, lack of moisture and nutrition, and unfavorable temperature, with complete exposure permitting constant inspection of the wound for possible areas of inflammatory reaction. With the complete exposure, suction drainage is employed through the use of hard rubber No. 28 Robinson tubes inserted through separate stab wounds in a dependent position; in a radical mastectomy, one such tube is usually adequate. With this combined management of complete exposure of the wound and constant suction drainage for the first two to three days, we have achieved primary healing in 82 per cent of patients with radical mastectomy. A minimum degree of marginal necrosis, with healing in 21 days or less, occurred in 15 per cent, and in only 3 per cent was there major necrosis of skin flaps. These results represent almost a complete reversal of our previous rates of healing.

Early evidence that we have collected also provides fairly good evidence that this method of management of wounds will be accompanied by a decrease in the incidence of lymphedema of the arm following radical mastectomy. Under the traditional plan of applying occlusive pressure dressings, only 28 per cent of our patients had no swelling by accurate measurement; 48 per cent had very moderate swelling (up to 2 cm. of disparity with the opposite arm), and of which the patient was usually not aware, while in 24 per cent the lymphedema produced a disparity in the two arms greater than 2 cm. in circumference, this being the group which included women with various degrees of disability from such lymphedema. We have had an opportunity of obtaining accurate arm measurements on some 40 patients who have had radical mastectomy with wound exposure and suction one year or more prior to our evaluation; the percentages of postmastectomy swelling are now reversed, with 74 per cent showing no edema, 14 per cent a moderate amount, and only 12 per cent with disparity in the arms greater than 2 cm. in circumference.

Condensed in Table I are a number of factors and their relationshrip to five-year survival in this series of patients. The predominant importance of the anatomic extent of the disease is illustrated forcefully in the extremes of 67 per cent survival for Stage I, and 4.7 per cent for Stage III (distant dissemination). It should be noted that all of these percentage values are for all cases, whether treated or untreated, died of other causes, untraced, and so forth. The duration of the tumor at the time of treatment, or at first observation, was of no real significance; the five-year survival of over 40 per cent for a duration of one month or less is of debatable significance compared to the rates of 34 per cent and 33 per cent for the two intervals up to 12 months, and of no significant difference to the survival of 36 months for those patients known to have had a tumor present for more than one year. The size of the primary lesion is of considerably greater importance, as shown in the descending scale of five-year survival with increasing size of the original focus of cancer of the breast. Nevertheless, the fact that almost 17 per cent of the really bulky tumors, and 25 per cent of those more than 3 to 5 cm., are attended by survival for more than five years, is indication of

TABLE I.

PER CENT SURVIVAL OF PATIENTS WITH CARCINOMA OF BREAST, BY VARIOUS FACTORS

(includes all cases — treated, untreated, dead of other causes, untraced)

FACTOR	*Subfactor*	*Per cent alive 5 or more years after treatment*
STAGE	I	67.1
	II A	51.1
	II B	16.9
	III	4.7
KNOWN DURATION OF PRIMARY LESION	1 Mo. or less	40.6
	→ 1 to 6 Mo.	34.7
	→ 6 to 12 Mo.	33.3
	→ 12 Mo.	36.0
SIZE OF PRIMARY LESION	1 cm. or less	60.0
	→ 1 cm. to 3 cm.	48.8
	→ 3 cm. to 5 cm.	25.0
	→ 5 cm.	16.7
HISTOLOGIC GRADE	Low	45.4
	Intermediate	49.2
	High	32.4
TREATMENT	Mastectomy	
	Standard radical	42.8
	with Vein resection	43.4
	Local surgery	22.2
	Irradiation	31.6
	Hormone administration	4.1

slow-growing tumors of favorable biologic significance, or slow-growing tumors which reach considerable size but are lacking in the biologic potential for early metastasis.

Surprising Disparity

A surprising disparity in correlation between histologic grading of the primary lesion and survival is apparent in this series. We have previously suggested that the histologic appearance of mammary carcinoma is not sufficiently reliable as a prognostic criterion to permit any accurate assessment of outlook for the individual patient on this basis alone. Combined with the anatomic extent of the tumor, it is a helpful index. This series, however, shows a greater lack of correlation between the histopathology and the pattern of survival than any series of which we are aware. Over 90 per cent of this series of patients have been operated upon in one of two major hospitals in Los Angeles, and in both institutions the quality of histopathologic interpretation is uniformly admirable.

In terms of treatment, it will be seen that the standard radical mastectomy, and the same procedure with the addition of vein resection, have yielded statistically identical results at five or more years. It should be remarked, however, that vein resection has ordinarily been done only for those patients in whom there were axillary nodes consistent in appearance with metastaitc involvement, and lying adjacent to or actually attached to the axillary vein. The exception to this sort of indication for resection of the axillary vein was in the instance of a relatively small number of patients at a time when the senior author was doing routine vein resection as an investigative procedure. It is thus proper to speculate, although no statistical proof is possible, that the wider resection of disease in the axillary apical area in more advanced disease is of some value, in that it produced a rate of survival equivalent to the standard radical procedure for patients with less advanced disease in most instances. The poor performance of local surgery, with a five-year survival about one-half that of the radical procedure, is not a significant difference in spite of this disparity, due to the small size of the patients treated by such local surgery. On the other hand, the five-year results of treatment by irradiation is surprisingly good, and this group is of adequate size for statistical comparison, as it numbered 180 patients. In many instances, however, the irradiation was supplemented by the use of hormonal therapy when metastatic disease became disseminated after control of primary and regional disease by irradiation for varying periods of time. Again, it should be emphasized that these percentage results are only those of survival, and not survival without disease. The group indicated as treated by administration of hormones is a small and statistically inconsequential group, but the 4 per cent of survivors were exclusively elderly or actually senile women, who have obtained with invariable promptitude complete regression of at least local and regional disease. For women of such advanced age we now employ estrogens as primary method of treatment even for operable cases, usually supplemented in the beginning by low dosage of irradiation to the primary tumor, and to the axillary nodes if they are of any significant size. As our experience with this special group of patients enlarges, and with zero failures in some 10 elderly patients to date, we have abandoned any thought of surgical treatment of women past 75 or 80 years of age. We shall soon have a modest series of such elderly women treated in this fashion to report upon at a later date.

Characteristics Important

One facet of our belief in the dominant importance of the inherent biologic characteristics of mammary carcinoma as a major determining factor in the outcome of treatment, and one which is seldom recognized or remembered, is the fact that cancer which is historically and clinically "late" or "advanced" may be curable. An illustration of this situation was Mrs. D. G., age 58, who was first seen with a primary tumor over 5 cm. in diameter, with retraction and attachment to the skin overlying the tumor, and some impairment of mobility of the breast over the chest wall due to early fixation to the pectoral fascia. No spread beyond the breast could be demonstrated, either by physical examination or x-ray study. At operation, the fixation to the pectoral fascia was such that some cartilage had to be resected in order to obtain a margin, but pathological examination of the surgical specimen verified the clinical impression of the absence of any involvement of axillary nodes. This woman was operated upon over eight years ago, and she still remains well and without recurrence or metastasis since the operative procedure. The explanation of this case, and of many similar patients, is seen in the histologic structure of the neoplasm, for this was a lobular carcinoma, 90 per cent of which microscopically was still in a pre-infiltrative stage. Such a lesion, of course, is unusual, but it demonstrates the necessity of avoiding the prejudice which is instigated by over-emphasis on so-called early diagnosis and early treatment. To such slogans should be added still another slogan, namely, that late cancer may also be curable. A reverse sort of situation is demonstrated by the problem of Mrs. F. W. T., age 52, who was found to have a poorly outlined, indurated area in the superficial portion of the breast just above the edge of the areola, which could not be distinctly outlined as a three-dimensional tumor, and by our best attempt at measurement involved an area 1.5 by 1.0 cm. The overlying skin showed a distinct erythema, and the patient stated that she had first noted this area of redness only seven days previously. Even more alarming, she stated that her first observation of the thickened area of underlying breast had preceded the erythema by only 10 days. There were half a dozen barely palpable axillary nodes on the same side, which one could not characterize as being consistent with metastasis. This patient thus presented the picture of an early acute carcinoma, and a biopsy of the erythematous skin showed cancer cells in the subepidermal lymphatics, an almost constant finding in genuine so-called inflammatory carcinoma of the breast. She was started on a trial of irradiation, and after four treatments, with little more than 500 roentgens delivered into the tumor, the primary lesion had disappeared. A full course of irradiation to the breast and axilla was then employed, and the local and regional disease did not recur at any subsequent time. Six months later she was seen with acute upper dorsal pain, and films showed multiple osteolytic metastasis in vertebral bodies. She responded well to hormonal alterations; these were first in the form of estrogens by mouth, as she was five years postmenopausal, and after a period of remission of 10 months the reactivation was promptly controlled by bilateral adrenalectomy, following which she had another period of remission of 22 months.

In 31 patients with radiosensitive mammary carcinoma, there has been complete regression in the primary lesion, while the involved axillary nodes in these cases have undergone complete regression in nine, major regression in 11, and only partial regression in another 11 patients. However, in only three patients did the disease in axillary lymph nodes reactivate and require further treatment. The longevity of these 31 women was an average of 26 months, of which time we were able to estimate that effective palliation continued for an average period of 24 months. There was major recurrence of the primary lesion in only four patients, and none of these required surgical treatment.

Steroidal Alterations

The continued investigation of the results of steroidal alterations in the treatment of disseminated mammary carcinoma has produced some interesting and important discoveries of basic nature. One of these is the fact that the woman who is responsive to hormonal alterations, as measured by objective regression of her disease, is biologically different from the patient who fails to exhibit any response to such treatment. This is demonstrated by their disparity in longevity, if nothing else; the nonresponsive cases, regardless of age or type of hormonal treatment, survived for statistically identical periods of 10 to 11 months in the 945 cases soon to be reported by the Subcommittee on Breast and Genital Cancer, Committee on Research, AMA. On the other hand, the responsive patients survived for almost 20 months, on the average, when treated by androgens, and for an average period of 28 months when the therapy was in the form of estrogenic hormones. This is a reminder to emphasize again the superiority of estrogens over androgens in the palliation of disseminated mammary carcinoma. At all ages after the fourth postmenopausal year, and in all sites of dissemination, including bony metastasis, the estrogens are at least equal, and more often superior, in performance to the androgens in inducing objective regression. Recalling the far greater distress to the patient which accompanies the side effects of androgens, there is no place for male hormones in women past the fourth postmenopausal year, unless as a trial in those who have become resistant to estrogens.

A further demonstration of the biologic difference between women responsive and nonresponsive to hormone therapy is the fact that for the responders, the 50 per cent end-point was at 24 months (or the median point at which 50 per cent of the sample was deceased), while the 50 per cent end-point for the nonresponders was at the level of seven months.

For patients who are premenopausal, the first measure of treatment for disseminated disease should be oophorectomy, although induction of the menopause by irradiation to the pelvis remains an acceptable substitute. About 40 per cent of women will obtain an objective regression after oophorectomy, the duration of which will average nine to 10 months.

We have determined to our own satisfaction that the supplementation of hormone therapy by low doses of irradiation to dominant areas of involvement is probably superior to the use of hormones alone; if nothing else, it produces more prompt control of symptomatic areas of dominant involvement. Our control group from the pre-hormone period had an average survival of six months for genuinely disseminated breast cancer, i.e., not disseminated to a single system such as the skeleton, but to soft tissue, viscera and bone. Compared to this survival of six months untreated, in our practice, irradiation plus hormones had produced 15 months' average survival, but in premenopausal women in whom the menopause is induced either surgically or by irradiation, we have obtained an average of 18 months of survival by following the reactivation after the artificial menopause by hormone (estrogenic) therapy. More recently, in those women who have shown objective regression to oophorectomy, or in suitable postmenopausal women with a good response to estrogen therapy, reactivation uncontrolled by other methods of hormone administration have been treated by adrenalectomy; in these women the graduated approach by oophorectomy or hormone therapy followed by adrenalectomy has resulted in an average longevity of 28.8 months. These figures are as statistically valid as they would appear to be on casual reading.

As with all other problems in the management of neoplastic disease, the palliative management of disseminated breast carcinoma requires a high degree of individualization. It is our own belief that, as larger series of patients become available for comparison and statistical testing, it will be proved that our present conviction in respect to the desirable sequence of alterations of steroidal metabolism will be confirmed. This conviction may be expressed by the whimsey that it is best to fire the small therapeutic bullets first, i.e., administer hormones, oophorectomy or pelvic irradiation, reserving the physiologic block-buster of adrenalectomy for those patients who have demonstrated a real and objective response to earlier measures of treatment. We can even conceive, with some difficulty, that the more hazardous insult to the organism, that of hypophysectomy, might even be of ultimate value in the responsive patient.

THE USE OF MARSILID* IN THE TREATMENT OF MENTAL DISORDERS RESISTIVE TO PREVIOUS THERAPY**

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Introduction

THE FIRST psychopharmacological drugs were all tranquilizers, applied to the abnormal activity or anxiety which plays an important role in the structure of many mental diseases. Though favorably accepted by psychiatrists, not all disorders require tranquilization, and the need for energizers in the psychiatric armamentarium is obvious. Today we have an effective psychiatric energizer in iproniazid. This paper mainly attempts to give treatment results of Marsilid in various psychiatric symptomatologies as they were observed and tabulated in some mental disorders. However, a brief survey of the pharmacodynamics of the drug may be helpful as an introduction.

The mode of action of ipronizaid has been and still is under investigation by various research institutions. It is generally accepted that it inhibits amine oxidase and thereby the catabolism of serotonin and catecholamines such as norepinephrine. The role of serotonin in influencing the mood seems to be well established, as reported by Olds(1) and by Spector, Prockop, Shore and Brodie.(2) These authors further show that the serotonin level in rabbit brains is vastly increased after the administration of Marsilid.

In a most revealing work on the so-called neurohormones, serotonin and norepinephrine, Brodie(3) refers to the original concept of the Nobel prize winner, W. R. Hess of Zurich. According to this, the diencephalic system is influenced by two antagonistic sets of agents having either (a) trophotropic predominance, or (b) ergotropic predominance. The psychotropic drugs introduced in recent years activate or inhibit one or the other group, thereby varying the balance of forces by causing "norepinephrine in the brain to act in an opposite fashion to serotonin . . . Administered intravenously to laboratory animals, it produces excitation and an electroencephalographic arousal pattern. . . . The psychic energizers such as iproniazid may produce ergotropic predominance by causing an increased level of norepinephrine in the brain."

Thus the actual energizing properties of iproniazid may stem not from an increase of serotonin in the brain, but of norepinephrine. However, all investigators are agreed that its administration results in increased levels of both neurohormones.

Before initiating this study, it was known to the author that Marsilid is of value in various types of depression. In addition, he had observed favorable results in stuporous catatonic schizophrenics(4) and its use in chronic schizophrenic patients has been reported by Zeller(5) and Lauer.(6) Prescribing Marsilid for stuporous catatonic schizophrenics was the result of a conjecture, *viz:* that catatonia might be comparable, at least in its manifestations, to a severe endogenous depression. In varying degrees, both present symptoms of psychomotor retardation, inhibition and lack of appetite, and both have been interpreted as the result of inwardly-directed aggression. Furthermore, both usually respond initially to convulsive cortical electrostimulation, although their eventual outcomes are frequently quite different.

The favorable results in catatonic schizophrenia with Marsilid alone and in combination with ECT are therefore not surprising. In some of the reported cases of catatonia, lasting improvement had been impossible to achieve by any other means, including ECT. (Since then more cases of depression and catatonia have been treated with Marsilid, either alone or in combination with ECT.) The drug has also been used in retarded, indifferent chronic schizophrenias of long duration.

Results

Seventy-three patients at the Arizona State Hospital were treated with Marsilid during the past year (1957). Almost all were cases of chronic illness, some of many years' duration. Since Marsilid was recommended for its analeptic energizing properties, it was used on patients who showed a slowing down of activity and interest, whether the picture was that of a depression, neurotic or psychotic, schizophrenic withdrawal, regression or stuporous catatonia.

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*Trade name of Hoffman-La Roche Inc., Nutley, N. J., for iproniazid.

**From Arizona State Hospital.

The obvious overall impression is that favorable results were achieved in a number of cases previously resistant to other therapies. In addition, more objective figures were obtained by grouping the patients into the four diagnostic categories as classified in the APA manual. The average starting dose was 50 mg. t.i.d., accompanied by one vitamin B capsule, later adjusted according to the appearance of side effects. In no case did we find it necessary to increase the dosage. The evaluation of patient improvement is indicated by 1 to 4 plus marks.

Depressions

This group comprises 11 patients, all of whom responded to Marsilid administration. While the number is comparatively small, the results are significant in that none of these patients had responded to other drugs or ECT. Three made a complete recovery (4 plus), five were classified much improved (3 plus), one was 2 plus and two were 1 plus. All have shown improvement with comparatively small dosages with no serious side-effects.

Of particular significance is the reaction in three women between 50 and 65 with severe depressive reactions of the involutional agitated type. They had been continuously agitated, depressed, unhappy, with a variety of somatic complaints – "sick all over." They had been hospitalized with little or no interruption over a number of years. All attempts to help them, including ECT and diencephalic non-convulsive stimulation, had failed to bring lasting improvement. Today the patients are out of the hospital, only being seen periodically in the out-patient clinic, they smile, and are pleasant and well adjusted. The dosage was 50 mg. t.i.d.

In all three cases the dosage was lowered while they were in the hospital. Within a few days minor symptoms reappeared but promptly subsided when the dosage was raised to the original level. Another attempt will be made at gradual reduction of the dosage under outpatient observation. It is impossible to say whether the same results could have been achieved had these patients not received previous electrotherapy.*

Of the cases marked 1 to 3 plus, one is at home, the others still in the hospital, but with some marked improvement.

Catatonic Schizophrenia

In this group there were 18 patients, all previously treated with every available means without lasting improvement, some hospitalized for as long as 10 years. Since the administration of Marsilid, four have been completely well for several months and have left the hospital. Of two who improved markedly (3 plus) one has left the hospital, although she is not considered recovered. Six with 2 plus improvement are now talking and eating and show some interest in life. Two have shown no response, and three had to be taken off the medication, after some initial improvement, because of various side-effects: combativeness, hypotension, and rather severe indefinite toxic reaction with hyperpyrexia respectively.

Marsilid has invariably solved feeding problems in catatonic patients; there has not been one case of tube-feeding on the female service during the year it has been used.

Chronic Schizophrenia other than Catatonic

This group had 32 patients, chronic cases who had not responded to previous therapy. It should again be emphasized that all had been considered hopeless and that some were severely disturbed. Marsilid was used only on patients with symptoms of retardation, withdrawal, or inactivity. Four of the group have made 4-plus recoveries and are now out of the hospital, one was rated 3 plus, and eight showed moderate but lasting improvement. Temporary mild improvement was observed in 10, and no results in the remaining nine.

It is worth mentioning that the number of side-effects was greatest in this group: four patients became hyperactive, one developed seizures, and the drug had to be discontinued in two because of dizziness. This may be because of the nature of the disease, or possibly because most of the patients had been on comparatively large doses of tranquilizers before Marsilid was tried.

Chronic Brain Syndrome with Depressive Symptoms

Here we had 12 patients, who had been on the geriatric service, and in addition to the characteristics of organic CNS disorder, had displayed loss of interest, loss of appetite, etc. They were apathetic and had not responded favorably to such stimulants as vitamins, metrazol and quinine. As might be expected, none has recovered, but six (50 per cent) showed 2 plus improvement and three 1-plus. One did not respond favorably, two showed unfavorable results, becoming hyperactive and disturbed, and one a case of general paresis, showed no response at all.

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*Since this paper was written, one of these women is now doing well without medication, which had been reduced gradually. Another had to return to the hospital because of manic symptoms. She was again discharged after the dosage had been adjusted to her needs.

Discussion

It is generally recognized that emotional responses may be the result of environmental cirumtsances and/or precipitated by unconscious and repressed dynamic factors. It is also obvious that biochemical or other physiologic conditions can create primary tension which may influence the thought content and lead to emotional manifestations. It is difficult to conceive of a free-floating emotion: in anger, for example, a target of aggression must be found to make it appear reasonable. This mental reversal of cause and effect relationships may be true under normal as well as pathological conditions.

It is possible that in paranoia, the feeling of being influenced is there primarily, and when it cannot be explained rationally, the patient justifies it by resorting to bizarre explanations: atomic rays, mental telepathy, etc. We know that a change of attitude and ideation may occur with the administration of psychopharmacologic drugs. This certainly indicates a relationship between biochemical processes and mood, and accordingly, the importance of chemotherapy.

In spite of the small number of cases reported here, it is felt that the results corroborate the findings of other investigators. In this connection it should be mentioned that previous to Marsilid a number of other drugs were recommended for increasing patient activity and improving the mood, among them amphetamine and dextroamphetamine. But the results with these drugs have always been temporary, and any beneficial effects have disappeared with their discontinuation. Moreover, quite frequently their use has had to be terminated because of severe side-effects: tremulousness, interference with appetite, in some cases even toxic psychoses. As for other analeptic drugs, we have used Ritalin and Meratran, the former has produced some temporary stimulating effects, but never the lasting improvement we have seen with Marsilid.

There is no question that in Marsilid we are dealing with a potent chemical which probably interferes effectively with metabolic processes. It is therefore not surprising that such a drug must be carefully adjusted to the needs of the individual. So far we have had to rely entirely on clinical observation, but it is hoped that the day will come when we can identify the metabolic disorder and its degree, and thus judiciously administer the proper dosage. Until then we will probably have to deal with various side-effects.

In view of some reports in the literature, it should be stated that at the Arizona State Hospital we had no fatalities attributable to Marsilid nor any cases of hepatitis or blood dyscrasias. There was some ankle edema, hypotensive effects, increased agitation, and one case of seizures which in some cases made it necessary to discontinue the drug altogether. In others a reduction of the dosage eliminated the side-effects.

Psychiatric treatment results were poor when side-effects developed. The occurrence of hyperreflexia is considered an early significant sign of these, and a good guide for adjustment of the dosage.

Some chronic schizophrenic patients exhibited a tendency to become hyperactive and sometimes combative. It may or may not be significant that a few of these expressed their hyperactivity and aggression by biting other patients.

Laboratory studies reported by a number of investigators are certainly of great scientific value and may eventually lead to a better interpretation of clinical experience. But in the end it is the result of treatment that counts, and it is hoped that this report may encourage the administration of Marsilid in patients whose condition indicates that its use will be beneficial.

Summary

This report covers treatment results with Marsilid on 73 patients in the Arizona State Hospital. The patients selected for the study were diagnosed in various categories: depressive reactions, catatonic schizophrenia, other chronic schizoprenias, and chronic brain syndromes. In the reported group of depressive reactions, there were some patients with severe agitation and others with severe retardation. In all other groups only patients with retardation, withdrawal or lack of appetite were treated. All patients had received previous treatment without lasting results.

Marsilid appears to be an effective and valuable drug, particularly in the treatment of depressive reactions and catatonic schizophrenias. Wherever unfavorable side-effects were encountered, adjustment of the dosage made it possible to avoid lasting ill-effects.

TABULATION OF CLINICAL RESULTS WITH THE USE OF MARSILID

Diagnosis	*Total No. Patients*	*Excellent XXXX*	*Marked XXX*	*Moderate XX*	*Little or Temporary X*	*No benefit*	*Discontinued (side-effects)*
Depressive states	11	3	5	1	2	0	
Catatonic schizophrenia	18	4	2	6	1	2	3
Chronic schizophrenia other than catatonic	32	4	1	8	10	9	7
CBS	12	0	0	6	3	1	2
	73	11	8	21	16	12	12

All patients in this group have shown no response to previous treatment including electrotherapy. Some had been hospitalized for many years.

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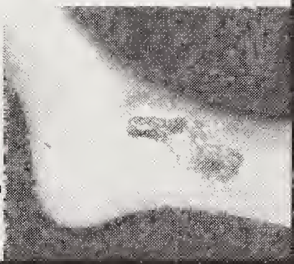

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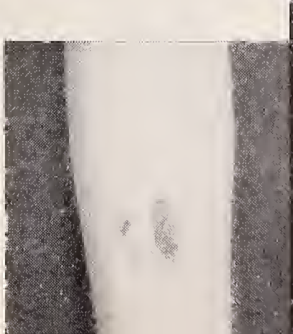

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narked reversal
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returned
to school . . .
osure advanced[1]

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in a week after
recurrent episode[1]

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CELLULITIS
normal routine
resumed after 4 days
of VARIDASE[1]

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ARIZONA MEDICINE
Journal of
The ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 16 NOVEMBER, 1959 NO. 11

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The Editor is always ready, willing, and happy to help in any way possible.

(The Opinions expressed in original contributions do not necessarily express the opinion of the Editorial Board.)

THE "ARIZONA PLAN"

MEDICAL education without federal subsidy is being championed by American business and by non-medical professional groups as well as by doctors of medicine in these 50 United States.

Indications are that the "Arizona Plan," which was presented to and adopted by the board of directors of the American Medical Education Foundation in 1958 has provoked interest in other states that it will be copied nationwide.

Commendation is due the Arizona Pharmaceutical Association for its official action in approving the plan and for its support in *Arizona Pharmacist.* Morticians and other friends of medical education have also shown enthusiastic support of the Arizona Plan and in 1958, together with many Arizona pharmacists, concretely demonstrated their interest by making substantial contributions to medical education through AMEF in lieu of Christmas gifts to doctors and their families. The individual contributions ranged from $15 to $1,000.

Some Arizona doctors expressed their gratitude to conferes for professional services rendered to medical education through AMEF sums of money in the name of the attending physician commensurate with the services received. They have established a most commendable precedent.

The Arizona Medical Association, Inc. and the American Medical Education Foundation salute and thank each one who has joined us in the struggle to insure unfettered medical education in our beloved country.

H.W.K.

PRESCOTT — Office very modernly equipped. Physician very recently deceased. City of 15,000. Excellent recreation facilities. Finest climate for asthma. Write or wire Mrs. Mary Allen, 878 Evergreen Road, Prescott, Arizona.

"HARDENING OF THE ARTERIES IS NO WORSE THAN SOFTENING OF THE WILL TO LIVE"

IN 1900 THERE were only 3 million Americans over 65 years of age. Today, there are over 15 million, and the number is increasing at about 330,000 per year. There are more than 5 million persons living today who are over 75 years of age. The social and economic problems created by these older individuals are of vast importance and demand solution.

National organizations have been formed to study the problems of the aging. The subcommittee on problems of the aged and aging has recently held hearings to attempt to gain information on the major problems, and to evolve programs to improve the status of the older citizens.

In this issue is reprinted the statement of the American Medical Association to the senate subcommittee. We can well be proud of our association for such a sound stand on the problems of aging. These philosophical statements describe the true source of the problem and its solution. The crux of the problem centers chiefly around the statement, "Good health is far more than the mere absence of disease or infirmity." This is only its negative side. Health is also the positive state of physical, mental, and social well-being; and every factor which detracts from that well-being detracts from the individual's total health. Loneliness, rejection, lack of useful things to do – these emphatically affect the over-all health of the aged." *Hardening of the arteries is certainly no worse than softening of the will to live."*

It is essential that thoughts and actions, in bringing forth the mechanism to improve the fate of our respected elders, be based on the concepts of our AMA rather than the narrow, misconceived ideas of the socialistic planners, as evidenced by their Forand bill which is unilaterally directed and would bankrupt the nation.

LESLIE B. SMITH, M.D.

PHYSICIAN'S-HOSPITAL RATING INDEX

HE PRESIDENT of our medical association, Dr. Dermont W. Melick, has again come forth with some constructive thinking as exemplified by his treatise, "What a Staff Doctor Expects of the Hospital Administrator" (*Hospitals,* May 1, 1959). This article proposes the development of a numerical Physician-Hospital Rating Index for each individual physician, to be based on the doctor's abilities, intentions, and actions. This he believes would allow "– the doctor to fortify his prestige in a hospital, and it would allow the administrator a differential evaluation of each staff physician. Also it would once and for all eliminate the unwarranted criticism that is often made about the hospital administrator showing favoritism."

Dr. Melick proposed that the standards and the actual rating of the doctors be the responsibility of the medical staff; and that the hospital administrator avoid any participation in such matters. This concept is idealistic and as such, should be acceptable. However, there are two major categories which have not been contemplated: 1. Hospital staffs are too frequently controlled by a close-knit active minority which cannot avoid being partial. 2. The prime purpose of the index would be for the use of the hospital administrator in the assignment of doctor's privileges, yet the administrator would be denied any considerations. There should be some integration between an index compiled by the staff and one compiled by the administrator because the first-hand knowledge of any doctor's attitudes and actions in a hospital can only be gained by the hospital administration.

The apprehension expressed, initially, by Dr. Melick regarding the discussion of such things as doctor-hospital relations and rating-index is quite justified; and is elucidated by the remarks of a hospital inspector a few years ago. A director of a hospital interne-resident educational program was explaining to the inspector how he ranked the various members of the staff doctor-staff, and assigned the house staff services according to the doctor's rank. The inspector remarked, ". . . You have more guts than I have seen in any hospital. Do you dare do this to your colleagues? I will predict that you will not get by with this type of thing for very long." The inspector's prediction came true because in a short time the director of the educational program was replaced. However, in support of Dr. Melick's fortitude, it should be noted that this particular director was subsequently recalled to the position, along with the ranking of his colleagues.

Many of the doctor-hospital problems would be eliminated if, as was suggested, the doctors are given a formal, early, and continuing education in the facts related to the management of the hospital, as well as information about the abilities of its administrator. Dr. Melick's ideas are worthy of serious consideration and should form a foundation for an improved doctor-hospital relationship.

L.B.S.

AN URGENT MESSAGE FROM YOUR PRESIDENT

THE TIME IS NOW

By Dermont W. Melick, M.D.

MISTAKE YOU not the situation is serious. The future, the reputation and the dignity of the medical profession is at stake. The Wagner-Murray-Dingell Bill was defeated by a concerted effort by you and your colleagues. The Forand Bill must be given the same lethal attention. We need more than your help. We need your anger. Your temper should be aroused in direct proportion to the threat of the Forand Bill which proposes to steal your very life in the professional field of your choice. We must pursue this with all due haste and speed. The time is now! !

The following was presented before the Maricopa County Medical Society on October 5, 1959. The clarion call for action against the Forand Bill was resounded. In addition other matters of interest to the membership of the Arizona Medical Association is herein included.

Your County Medical Society has expressed a desire to have presented each month a resume on the activities of the Arizona Medical Association. As President of the Arizona Medical Association I am happy to comply with this request. Doctor Lorel Stapley, Secretary of the state association, and I will do our best to carry out this assignment, and present as concise a summary as possible regarding what has developed in the preceding month with emphasis on those things we deem important. I think misunderstanding between county societies and their parent state organizations often stems from lack of adequate communication between the two. Doctor Stapley and I propose that this shall not be the case in our particular organizations.

As a kickoff let me relate to you that Doctor Jesse D. Hamer, Mr. Robert Carpenter and I have just returned from St. Louis, Missouri. The American Medical Association requested that two members from each state association plus the executive secretary appear in St. Louis to participate in a review of the Forand Bill. I must admit I was not enthusiastic about going. My lack of enthusiasm stemmed directly from the poor results obtained by the AMA in their efforts to have Congress vote down House Bill 7225. I was further chagrined when President Eisenhower signed this into law after Doctor Elmer Hess, at that time President of the AMA, had led me to believe that the veto was in the bag. I tried to get two of your good colleagues to go to this meeting but both were committed to previous engagements. Despite my reluctance and the jaundiced eye that I took with me to St. Louis I can report to you that I have had a rude awakening and the AMA appears in a much different and I am happy to say, favorable light. I am now convinced that in no other way would I have been able to understand the serious implications of the Forand Bill. The AMA is working hammer and tongs to get across the message to you through us. I am fully on the alert following this trip. I am doubly aware of my responsibility as your President to alert you to this nefarious piece of socialistic shenanigans about to be re-presented to the Congress of the United States come January 30, 1960, just three months from now. If the do-gooders and the supporters of the Forand Bill were to be able to execute their intentions you and I will be up to our respective necks in socialized medicine by January 30, 1960. We must not let this happen to us nor to this country of ours. I would be derelict in my duty to you if I did not sound the warning in clear and lucid terms.

If the Forand Bill should become law because of lethargy on our part I am sure you would look to your responsible association officers as being asleep at the switch. This, therefore is my initial attempt to explain to you the necessity for action. I will have more to say to you individually and in groups as soon as I have had a chance to digest a rather large packet of information plus a word by word review of a 700 page book dealing with the hearings on the Forand Bill before the Ways and Means Committee of the House of Representatives. As soon as this is accomplished I would like to meet with the Women's Auxiliary.

I think you will agree with me that when the little lady speaks we listen. I would therefore like to convince them first that this step toward socialized medicine must not be allowed to happen and they in turn will then help me convince you. I do this for two reasons: first, their primary interest is you and your career — they are as much interested in preserving it as you, and second; in this State of community property law, let's face it, half of all your worldly goods is theirs and this too with your help they would like to preserve. I might be influenced to alter this method of approach but believe me time is of the essence if we are going to get this job done in a proper fashion. If I might have the opportunity of appearing before the various clinical clubs during their usual monthly meetings I believe the word could be spread more rapidly. Committees at both the County and State level are to be alerted and briefed so they can assist.

In the process of getting the ball rolling plans must be definite for a special meeting of this Society before the end of October. At this meeting I would hope we could have on hand not only a good representation from this Society but also some of the big wheels of the AMA. By that time you should have questions and if you do not I will have them for you. I promise to work diligently between now and then in order to have the subject well in hand so that proper emphasis is made on the really important points so that your time will not be wasted in trying to separate the sheep from the goats.

We are faced with the very much alive ghost of the Wagner-Murray-Dingell Bill masquerading in the name of the Forand Bill. This bill has one objective and that is to ruin the practice of medicine. It leans on sentimental poppycock in trying to prove that dear old Grandpa and Grandma are going to be thrown in the ocean unless this bill becomes law. We who are more acutely interested in Grandma and Grandpa than any of these flannel mouthed socialistic beatniks are made to look like Simon Legree with a flair for euthanasia.

The smear campaign is about to be launched on the first stage of a jet ride and we must be prepared to shoot it down. In any event the challenge is before us and I propose to see that as one State organization we will be ready, willing and able to stand up and be counted in an effective manner. When the blue chips are down I don't want to see any of these socialistic screwballs dealing with marked cards. One gimmick they use is to present published articles originating in England which gives one the impression the English physicians are happy, busy and reconciled to the National Health Service. I submit this is gross misrepresentation and I have the following to prove it:

"Journal of The American Medical Association
"September 26, 1959 — 169/461

"Report from the United Kingdom:

"At the annual meeting of the British Medical Association in Edinburgh discussion was had regarding an alternative to the National Health Service. The cost of the scheme would be met in part by the state and out of insurance funds. Doctors would be paid for each service they rendered. Control would be by an independent body on which the medical profession, the public, the government and recognized insurance agencies were represented. The association's council, representing more than 72,000 doctors, was instructed to approach other professional bodies about the formation of a confederation of professional associations. Doctor E. A. Gerrard said that, while the influence of the trade unions and big business had steadily increased, that of the professional classes had tended to diminish. The proposed confederation should be free from party politics."

At the same meeting attention was called to the fact that *not one* new general hospital had been completed in Great Britain since the National Health Service started.

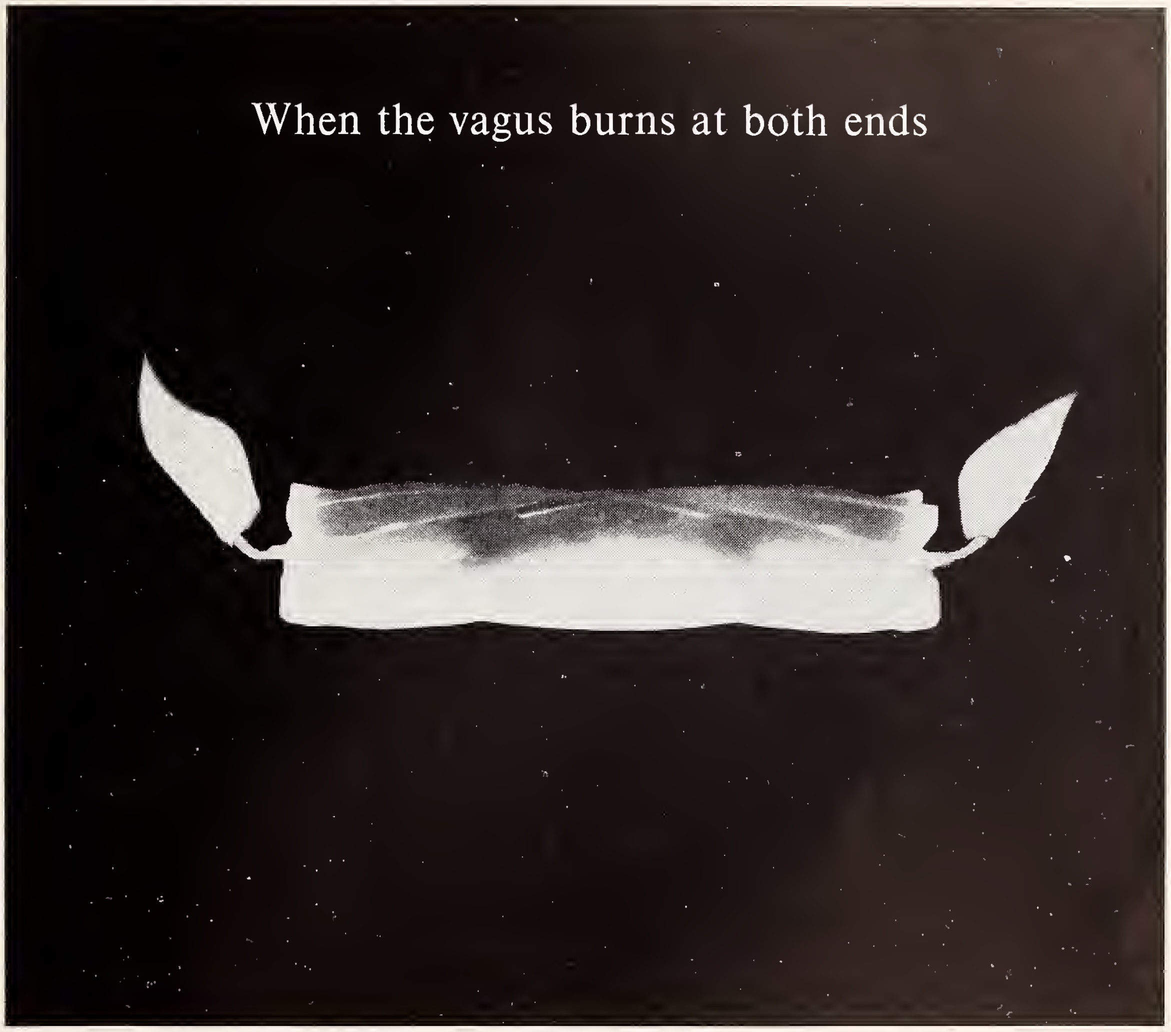
It is interesting that visitors from 59 countries were treated for free. The number of U.S. visitors receiving such treatment was near the top of the list.

NOTICE

On and after January 1, 1960, The Arizona Medical Association, Inc. will assume the management and responsibility of publishing its ARIZONA MEDICINE JOURNAL.

In the process of moving all the records, subscription lists, contracts, etc., some of this data may be temporarily misplaced.

Should you fail to receive your copy of any issue or have any question pertaining to advertising, circulation, or other interest please direct your inquiry to The Arizona Medical Association, Inc., Suite 1021, Central Towers Building, Phoenix, Arizona.



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Topics of Current Medical Interest

MEDICAL MANPOWER FOR ARIZONA

Dermont W. Melick, M.D.

THE NEW Committee on Careers has been appointed with three specific goals in mind. The first goal is to encourage our high school students to consider the study of medicine as a career. The second goal is to determine ways and means to finance students interested in studying medicine. The third goal is to consider the practice of medicine in rural communities and endeavor to encourage physicians to practice in those rural communities where there is a need for their services.

I think there are prime reasons why the appointment of a Committee on Careers is of importance. In the first place, it is obvious that we as physicians must accept the obligation of actually competing for the interest of and the proper selection of a career among our high school students. We can no longer sit by and hope that a student will by some peculiar happenstance become interested in the study of medicine. We owe it to our profession and to the health needs of Arizona to see to it that we have adequate medical manpower. In order to obtain this adequacy, we must compete against other fields of endeavor in order to fortify our well deserved reputation as a leading profession. How to tackle this problem and actually enter the field of competition may be carried out a number of ways. First of all it devolves on every physician in his or her community to encourage high school students to explore the opportunities offered in the practice of medicine. I am sure you are aware of the fact that all high schools present at some time during the year, a "Career Day." I have one objection to the conduct of these career days. This objection is related to the procedure wherein the student is allowed to select a career before he has had this career adequately outlined for him. I think this method places the cart before the horse. It would be much better if the career day was planned in two parts. The first part of the career day would be for presentation of careers by proper individuals before the student body as a whole. The second part of the career day would be for explanation of specific careers in isolated groups. I think this would often result in a student ending up in a very much different group than he might have chosen originally. The Committee on Careers must reach the high school officials and ask to participate in these career days. I have found at least one high school in which the profession of medicine was not mentioned.

Another method for reaching the high school student would be television. At the present time, there is activity along this line on the campus at the University of Arizona and Arizona State University, and these outlets could be used to reach a number of students who might otherwise be missed. Also, on or about September 1960, there will be activated an educational television station (Channel 8) in Phoenix. This channel will be exclusively educational based on the concept of community service. When Channel 8 is available, I hope some of our colleagues will participate in presenting medicine as a career to the television audience.

Aid for the Student

The second goal is to determine ways and means to finance students interested in studying medicine. To my belief, this means that any individual in the State of Arizona who wishes to study medicine should have that opportunity. Financial backing should be provided such as individual. Particularly is this true of the individual who must be entirely self-supporting. We should seek out the good students who lack financial backing and see to it that he has a chance to continue his education. Many excellent students are overwhelmed by the number of years of study necessary to become a doctor and are completely discouraged about the possibility of adequate financing. This is an educational process that will fall to the lot of the committee on careers. We may be able to "salvage" a goodly number of these students by educating them to the fact that the opportunity exists and the money is available. The committee on careers will not be embarking on a completely virgin field as far as financial aid to students is concerned. The Arizona Medical

Association and the State of Arizona are both providing financial aid to medical students. It might be well to review the present situation in order to fully appreciate what a really good job is being done along these lines. The Benevolent and Loan Fund Committee of the Arizona Medical Association was activated by our recent change in the constitution and by-laws. This committee will administer a fund of $47,000. This will be used to assist our more unfortunate colleagues in times of financial distress. The largest bulk of this $47,000, however, will be used for a loan fund for medical students. The Benevolent and Loan Fund Committee will act in close co-operation with the Committee on Careers. The Committee on Careers, however, would be specifically charged with building up the fund. Philanthropists often look to well-established organizations for advice. We should not only be able to give advice, but also vigorous encouragement to these well-intentioned individuals. We must be able to sell these men of means who have a will to give for this advancement of their fellow man the fact that our cause is deserving of unrestricted financial support. It is hoped that in 10 years this $47,000 will have been increased to a total figure of $150,000. With a loan fund of $150,000, it is believed the fund could be continued "in perpetuity." This term, "in perpetuity," reflects the findings of other loan funds of similar magnitude whereby the first monies loaned are beginning to return to the fund as the last monies are being expended. The fund is thereby never completely depleted and results in a rotating fund "in perpetuity."

In addition to this loan fund of $47,000, the Arizona Medical Association has contributed yearly to the American Medical Educational Foundation Fund between $8,000 and $10,000. At the present time, this association has placed $25,000 in that particular fund. It seems best that such a fund should receive continuing support in the future. It is also true, however, that the association can divert this donation to our loan fund if it so desires. At this particular time, there seems no reason to do this. It may be a consideration in the future.

The State of Arizona, as you all know, provides for medical students under the Western Interstate Compact for Higher Education. The budget for 1959-60 is $90,000. This provides $2,000 for each of 45 Arizona students. When one combines this $90,000 from the State of Arizona with the monies above noted originating in the Arizona Medical Association, the total is $162,000. This is no small financial support. It is a commendable effort toward educating medical manpower for the State of Arizona. I think our state association is to be congratulated. We, in turn, can be rightfully proud of those citizens in our state who have seen to it that the Western Interstate Compact continues to be a successful co-partner in this effort to educate medical students.

Loan funds other than the Arizona Medical Association are available, but an organized tabulation of what they are; where they are; or how they may be obtained is a chaotic mystery for the Committee on Careers to solve.

Manpower Distribution

The third goal of the Committee on Careers will have to do with the problem of distribution of physicians throughout the state. The rural communities continually have difficulty obtaining adequate medical manpower. This difficulty certainly does not stem from any effort on the part of the local doctors to keep out competition. I am happy to say that the exact opposite is true. They invite and encourage new doctors to practice in the rural communities. Complete success does not attend their efforts. It is interesting to speculate on why this should be the fact. In general, it might be said that the rural communities may not offer educational opportunities at a level of excellency equal with the cities. It is the desire of the doctor and usually expressed vehemently by the wife, that the children must be exposed to the best educational opportunities available. Such being the case, the decision is often made to practice in the city rather than in the rural community. The young physician also finds that his own private medical educational opportunities are much greater in the city where he has a choice of numerous medical meetings. In the case of the specialists, the limitation of practice usually means that he must seek the more populated centers. The type of physician also has a definite influence on choice of location. The new, incoming physician to Arizona is represented by three fairly distinct classifications. It might be well to peruse these classifications so that we may know what to expect of them.

One of the most interesting examples is the migrant physician. This individual may be in the younger or older age group. The older age migrant causes some concern. He has been described by one of my more irreverent friends as " a brain on the wane who is looking for an appreciative audience so that he may degenerate with dignity." We sometimes wonder why these older and often well established practitioners do not stay put in their original locations. We sometimes feel resentful of their entrance into our medical environment. In some states, measures have been taken to exclude them. For instance, in Florida, they do not have reciprocity, while in Arizona, we do have reciprocity. In Florida, it is necessary for the migrant physician to take the written examination and the mortality rate is 22.5 per cent. In Arizona, our reciprocity with other states, and the fact that our written examination has a lower mortality rate, allows for a grater number of migrant physicians to find Arizona a haven of refuge. It is to be noted that these migrant physicians so far *be they young or old,* have appeared to fit in quite well with our local medical fraternity. One can visualize a time when the migrant physician may so overwhelm the State of Arizona, that we may be forced to take action similar to the State of Florida.

The second classification of the incoming physician is the immigrant physician. These individuals have been trained in foreign universities and they desire to practice in the state. We have accepted them as residents and housestaff internes, but acceptance as a fellow colleague in the practice of medicine has often proved to be difficult. This difficulty arises from the fact that it has been impossible to determine the quality of the medical education to which the immigrant physician has been exposed. Recently this has been solved, and we may be able to look forward to a different attitude toward the immigrant physician in the future. As you know, a screening board is now active at the national level (Educational Council for Foreign Medical Graduates), and the immigrant physicians have a much better chance of being recognized. We have a more definite measure as to their education when their credentials and abilities are screened by this board. If and when we find the immigrant physician moving to Arizona in appreciable numbers, we should give some serious thought as to the distribution of this particular type of physician. One state, South Dakota, will not allow a foreign physician to be licensed until he has practiced (under a temporary permit) for five years in a rural area in South Dakota. During this five years, his practice is under scrutiny by the state board of medical examiners. If his five years of practice in the rural area is acceptable, then the state licensing board will give him a permanent license to practice. This particular requirement may or may not be advantageous to the State of South Dakota. I can see two objections; the first would be that the doctors in the rural communities might resent the fact that the immigrant physician is being forced upon him.

Immigrant Vs. Native

Secondly, the number of available immigrant physicians might outnumber the available places. The licensing board would be forced into an arbitrary, untenable position in picking one immigrant physician against another for rural practice. It would seem therefore, from a practical viewpoint, that the immigrant physician will probably not aid our rural communities a great deal. This brings us down to our supply of "native physicians." By this I mean an individual who is a resident of Arizona and who eventually returns to practice in this state. It would seem to me that the Committee on Careers will have to appeal to this type of individual to help out in the rural communities. Certainly he will do the best job, and he will be readily accepted by the local rural physicians. If the Arizona Medical Association and the State of Arizona does assist these students in obtaining an education, these students are morally obligated to serve where needed. I am not trying to say we should force him to practice in a community against his will. I do think, however, that if the individual can be educated to realize his responsibilities to the State of Arizona, he could very easily plan his service so it would be no great imposition. We must convince these doctors that the rural communities would benefit greatly and they, in turn, would profit by the experience. A "tour of duty" from one to five years would discharge their obligations. These doctors could be convinced that practice in a rural community would be a golden opportunity to establish self reliance and self confidence at an early date in their chosen work. They would be able to orient themselves and make a better choice as to whether they would prefer to stay in the rural community, or go to the city, or change to a specialty. This one year, or two years, or five years would not be "lost ground." I can fortify this by saying that those of us who have experienced it have been convinced that it is one important step in a well rounded medical career and is highly recommended. These then, are problems as I visualize it for the Committee on Careers.

A word about a medical school. We have heard and read both pro and con on this subject. The last annual meeting devoted one full day to a complete discussion of medical education. The attendance of the members of the association was poor. A chance to review the presentations made by our invited medical education experts was afforded the membership by the papers published in *Arizona Medicine* and in pamphlet form. If you were one of those too busy, too tired, too bored, or too lazy to take advantage of the opportunity to listen to these experts, please accept this recommendation that the published papers will be well worth your time and reading effort.

Please keep in mind also the study to be conducted by the Board of Regents; $135,000 has been granted by the Commonwealth Fund to implement a study in the State of Arizona. This will be an exploratory inquiry and fact finding project second to none. We, as an association, have contributed money to this study. We will now be asked to contribute time and effort as direct participants in the study in order to insure it being a success. I am sure your co-operation will be forthcoming. Here will be an opportunity for the pros and cons to meet on a middle ground and work out answers that should be mutually satisfactory.

Regardless of the outcome of the Board of Regents study, the aims, plans and goals of the Committee on Careers will not change. To summarize, it will be expected to accomplish the following:

a. To explore adequate methods to encourage students to study medicine.

b. To explore scholarships and loan funds in such a way as to not only augment our own loan funds, but to tabulate the other possible sources of financing for medical students.

c. To devise ways and means to assist rural areas in obtaining physicians.

I think the success of the Committee on Careers depends upon a certain amount of inspiration, a great deal of co-operation, and an ability to direct effective endeavor in the right pathway and pursue it thereafter with a purposefulness that brooks no deviation.

The final goal, of course, is the best medical care possible for the citizens of the State of Arizona. To this concept I know we are all dedicated.

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THE ARIZONA MEDICAL ASSOCIATION, INC.

BENEVOLENT AND LOAN FUND COMMITTEE

MEETING of the benevolent and loan fund committee of The Arizona Medical Association, Inc., held in the central office of the association, Room 826 Security Building, Phoenix, Ariz., Sunday, Aug. 23, 1959, Ernest A. Born, M.D., chairman, presiding.

Roll Call

PRESENT: Dr. Ernest A. Born, chairman; Dr. Dermont W. Melick, president; Dr. Donald K. Buffmire; Dr. Clarence E. Yount, Jr., treasurer. Staff: Robert Carpenter, executive secretary.

Benevolent and Loan Fund

Doctor Born submitted for review, suggested details associated with the operation of the benevolent and loan fund of the association, authorized by the house of delegates, April 28, 1956, and provided for in the revised articles of incorporation and by-laws of the association, outlined below:

PURPOSE: To make loans available to Arizona medical students for the purpose of completing a medical education; to provide funds to aid members of The Arizona Medical Association, Inc., who are in need of financial assistance; and to utilize funds now existing in the medical defense fund of the association, together with any assessments, gifts, donations, bequests, legacies, and interest derived therefrom.

Operation of the Student Loan Fund

APPLICATIONS: All applications will be received through the central office (fund information office) of The Arizona Medical Association, Inc., presently located at 826 Security Building,* Phoenix, Ariz.

TO WHOM LOANS WILL BE MADE: 1. Bona fide residents of Arizona for not less than one year. This is defined as individuals with established homes or whose family has an established residence in Arizona.

2. The student must be in good standing at an American Medical Association approved medical school or be accepted for enrollment in same.

3. The funds are to be used for tuition, books, board and room only.

4. Loans up to $1,500 per year may be made to deserving students, no loan to exceed $6,000 for a four-year period.

5. Information from the applicants will be obtained from a detailed "application for loan" supplied the applicant. Standing of the student at his or her medical school will be obtained from the Dean of the medical school attended, or other proof of his enrollment will be obtained.

REQUIREMENTS: Repayment of the loan is required of the applicant. Interest on the loan will be 6 per cent per annum beginning at the time of entering active practice, or becoming gainfully employed, excluding time served as intern, resident or involuntary service in the uniformed services of the United States. Should the recipient for any cause be unable to complete his medical education, he will be required, at once, to provide the Arizona Medical Association Benevolent and Loan Fund with a note secured by a bank for the amount of the loan guaranteeing repayment.

Recipient of loans will guarantee the amount of the loan by term life insurance payable to the Arizona Medical Association Benevolent and Loan Fund. Assignment of existing life insurance in the amount of the loan made payable as above, is acceptable.

Recipients of loans are expected to practice in the State of Arizona. Location of practice may be any Arizona community; however, some attempt to provide physicians in communities where the need exists should be considered. When locations other than Arizona are selected by the applicant, it will be determined by the committee that the best interests of the applicant and the fund are considered.

The recipient will execute a standard promissory note for the amount of the loan payable to the Arizona Medical Association Benevolent and Loan Fund, and in the case of a minor, the note must be guaranteed by a responsible adult.

The recipient will sign an affidavit swearing that the information in his application for loan is true, said affidavit to be properly notarized.

Details of Operation

Requests for loans from the Arizona Medical Association Benevolent and Loan Fund will be placed in the hands of the chairman of this committee. The chairman will then:

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*The association has since moved its offices to Suite 1021, Central Towers Building.

1. Ascertain the amount of loan requested by the applicant.
2. Furnish the applicant with an application for loan.
3. Review the applications and make such further investigation as deemed necessary.
4. Review all communications relative to previous loans and keep files current on all indebted to the fund.
5. Investigate requests from county societies for aid to members of The Arizona Medical Association, Inc.
6. Call meetings of the benevolent and loan fund committee for the purpose of considering requests for loans or gifts from the fund and present the above findings for their action.

Loans or gifts so approved will be submitted to the secretary of The Arizona Medical Association, Inc., and he will:

1. Obtain and retain a term insurance policy in the name of the recipient payable to the benevolent and loan fund for the amount of the loan renewable annually until the loan is paid. In lieu of this, he may obtain an assignment in the amount of the loan from life insurance already carried by the applicant.
2. Have the recipient sign a standard promissory note payable to the Arizona Medical Association Benevolent and Loan Fund and, in the case of a minor, have the note guaranteed by a responsible adult.
4. Provide the applicant with a demand on the treasurer for the monies so approved and guaranteed.

The treasurer of The Arizona Medical Association, Inc., will provide the chairman of this committee with a statement of the benevolent and loan fund at the close of each fiscal year.

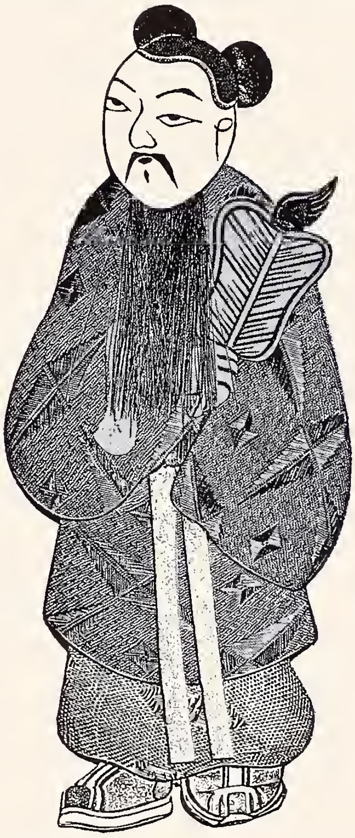
Changes in the details of operation of the fund will be made, as found necessary, and submitted to the board of directors of The Arizona Medical Association, Inc., for approval or rejection.

Application for Loan Fund

The form of "Application for Loan" proposed for use was also reviewed.

It was determined that the requirement incorporated therein: "To refrain from purchasing an automobile until loan is paid except with the consent of the benevolent and loan fund committee" be stricken from the application, it being considered unreasonable and impractical;

immortals of chinese mythology:



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further, it is required that the funds be used for tuition, books, board and room only and must be agreed to by the applicant to obtain a loan.

It was moved by Doctor Yount, seconded by Doctor Buffmire and unanimously carried that the application have attached to it an affidavit signed by the applicant swearing that the matters therein contained are true, as recommended by counsel.

Loans

Referring to Chapter VII, Section 4(a) of the by-laws and question raised by counsel, it was agreed that the benevolent and loan fund (standing) committee is given the power to make two kinds of loans: (a) direct grants from fund income to association members in financial distress; and (b) loans on a revolving basis to assist worthy young residents of Arizona in securing a medical education. While, as pointed out, it is not clear whether the latter loans, too, must come from income, the section being silent thereon, the committee interprets it not so, the total fund on a revolving (pay-back) basis being available.

Contract Vs. Promissory Note

Counsel referred to a previous opinion on this subject, rendered April 8, 1957, as follows:

"Rather than the execution of an additional contract at the time of making of the loan, we would suggest the execution of a standard promissory note by the applicant. If the applicant is a minor, the note should be guaranteed by a responsible adult to make collection more simple and to ameliorate the problems inherent in any minor's contract. We would also suggest that the note be made to bear interest at a date certain and to be payable at a date certain (based on the estimated year in which the applicant will probably be gainfully employed). It would be understood that if gainful employment is postponed for a valid reason, that the association would take a new note from the applicant, but unless a date certain is selected originally, the association would have the very practical burden of trying to ascertain when the applicant actually began to be employed, and the note to come due."

Counsel further stated he believes there is much to be said for this procedure rather than attempting to standardize a contract. Principal among its advantages are: (1) flexibility; and (2) the implied leverage over any borrower that is always present when a negotiable note has been signed, meaning that the note can be transferred to a bank, collection agency, or others for collection. Actually, you would probably never make such a transfer but the fact that it would be possible so to do puts the borrower in a somewhat more obligated position than he might feel himself to be with respect to a large and friendly society.

The committee agreed to such procedure and requirement.

Insurance

It was agreed that recipients of loans will guarantee the amount of the loan by term life insurance, payable to the Arizona Medical Association Benevolent and Loan Fund; also, that assignment of existing life insurance in the amount of the loan, payable to the Arizona Medical Association Benevolent and Loan Fund, in lieu thereof (term life insurance), is acceptable. However, it was directed that information be obtained regarding: (a) rates and availability of term life insurance for the purpose intended; (b) determine possibilities of insuring the entire fund and then issuing individual policies as required, similar to "personal loan" insurance guarantee requirements exacted of loan institutions today; (c) and explore possibilities of obtaining disability insurance, in addition to life insurance, presently being considered by loan companies.

Action

Following exhaustive review of all aspects of the Arizona Medical Association Benevolent and Loan Fund program, it was determined that the committee recommend to the board of directors of the association approval of the outline of procedure, requirements, details of operation and form of application, as amended and corrected, and herein proposed. It was further determined that the application form be revamped to include an outline of the operational details, requirements, purpose, etc., and made a part thereof.

Loan Applications Reviewed

1. Leslie J. Belsher

It was moved by Doctor Melick, seconded by Doctor Buffmire and unanimously carried that a loan of $1,500 be approved for Leslie J. Belsher, based on information already in hand and pending favorable reporting of the Dean and satisfactory completion and presentation of application currently in the mail.

2. Charles Fraser

It was moved by Doctor Buffmire, seconded by Doctor Melick and unanmiously carried that a loan of $1,500 be approved for Charles Fraser based on information in hand and filing of a satisfactory application with supporting evidence of worthiness.

3. Kathryn Willingham

It was moved by Doctor Melick, seconded by Doctor Buffmire and unanimously carried that a loan of $1,500 be approved for Kathryn Willingham based on information in hand, pending execution and receipt of her application, duly notarized.

It was directed that the loans hereinabove approved be referred to the board of directors for review with recommendation of approval and payment authorization.

William Nerlich — Loan Fund Director — USC

Doctor Born reported he had corresponded with Mr. William Nerlich, Director, Loan Fund Committee, University of Southern California, obtained information desired and directed that the board of directors be informed there will be no need for the honorarium of $100 authorized paid to Mr. Nerlich, should it be found desirable to invite him to confer in Arizona with this committee.

Meeting adjourned.

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Secretary
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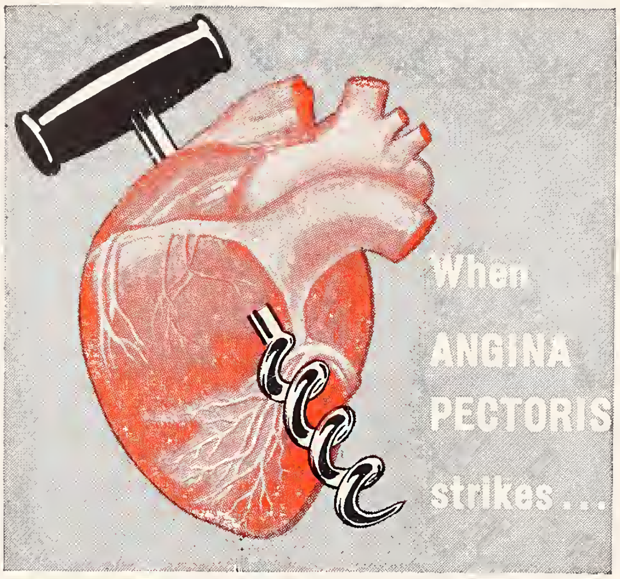

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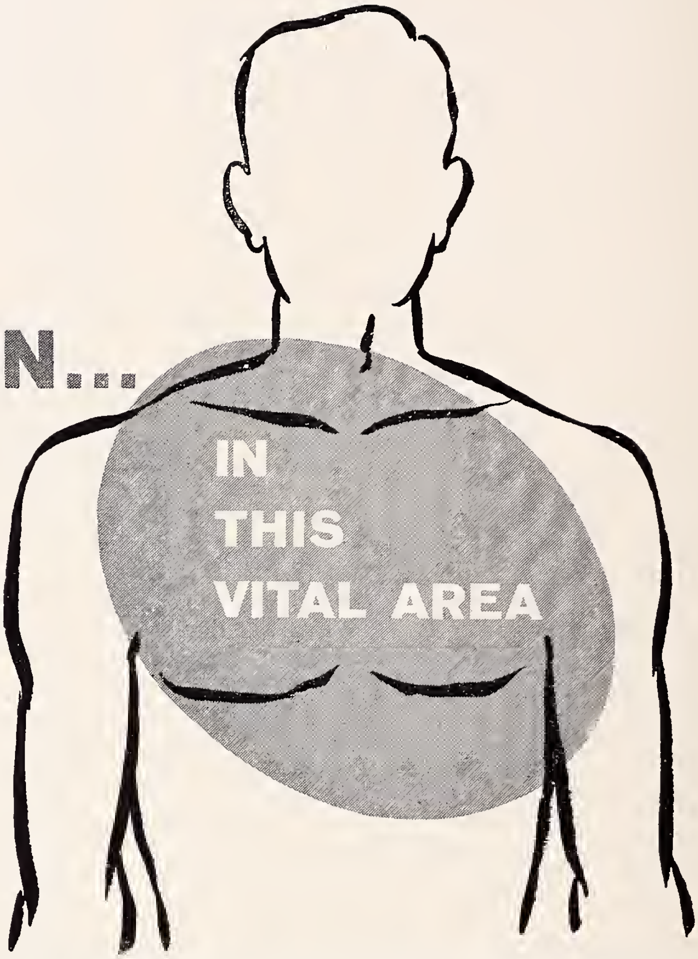

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THE ARIZONA MEDICAL ASSOCIATION, INC.

STATEMENT OF JESSE D. HAMER, M.D. REPRESENTING THE ARIZONA MEDICAL ASSOCIATION ON HR 4700 SUBMITTED TO THE HOUSE WAYS AND MEANS COMMITTEE

July 21, 1959

MR. CHAIRMAN and members of the ways and means committee:

My name is Jesse D. Hamer. I have been engaged in the private practice of medicine in Phoenix, Ariz., since 1928. I am a past president of the Arizona Medical Association, and I represent the doctors in my state in the House of Delegates of the American Medical Association.

The doctors of Arizona are becoming increasingly concerned with the tendency which has grown in recent times whereby the federal government is looked to for the solution of problems which were previously handled by the individual, his family, or his local community. We sincerely believe that the fostering of this attitude can only result in a diminution of the freedoms Americans have historically enjoyed.

We believe that HR 4700 is but one more paving block on the road to complete government control in the daily lives of Americans. We therefore oppose its enactment.

The committee has been informed of the programs already in existence or in the process of expansion in many of our states and communities which are leading to a solution of the health problems of the aged. This action has been stimulated, to some degree, by organizational promotion in each of the states in preparation for the White House Conference on Aging in January 1961. Recently, 900 individuals gathered in a preliminary workshop preparatory to this conference at Ann Arbor, Mich. Under the direction of the department of health, education, and welfare, state and local groups are being encouraged to study and develop sound public health programs for their people, and to exchange ideas concerning the most constructive experiments that are already in operation in many of our communities.

Health should be one of the functions of the community's total way of life; and furtherance of health goals should be dependent upon local initiative, support, and participation. Health should also be closely related to such factors as housing, nutrition, and the basic standard of living. Therefore, the first steps toward dynamic planning for health is the formation of local and state citizens' councils wherever they do not already exist, to serve as the conscience of the community on all matters of general welfare.

These councils can bring together lay and professional groups for the study and solution of health problems not only for the aged, but for all segments of the community. In many instances, the local health department, state health department, hospital authorities, medical societies, public welfare departments, state and local officials have joined forces. Such councils are gathering factual data to establish the nature of health needs and to develop methods for effective implementation of programs to meet them.

It is through the encouragement of these grass root movements with intimate, face-to-face associations, and the satisfaction to be derived from the sense of sharing in a creative activity that these problems can and will be solved.

It is through such planning as the White House Conference on Aging that our citizens will learn by direct participation in planning for their own health and that of senior citizens that the problem is closely enmeshed with their daily lives. This can only end in a broadening and strengthening of the availability of local facilities.

In order to have fewer sick people, the development of preventive health programs based on constant research should go hand in hand with the expansion of curative facilities. We should have positive aims for the re-invigoration of the human mind, body, and spirit and not merely be interested in the alleviation of a suffering created to a great extent by our social defects.

Far too much of our welfare work is now devoted to compensating people for misfortune that might have been prevented. To be sure, we must protect the sick, the weak, and the incompetent. But it is high time that we spend more of our energies in protecting the well, the strong, and the talented if our nation is ever going to develop its fullest human, civic, and ethicopolitical capacities. Our responsibility must be the creating and protecting of the gifted individual while improving the status of the less fortunate through health care or otherwise.

We accept the premise that good medical care should be made available for all the people. How can it be financed for the low income groups? Can voluntary health insurance take care of the major needs for hospitalization and medical care?

It Can Be Done

We believe that it can be done — even with the lower income groups. Doctors historically have lowered their fees commensurate with the individual's ability to pay. Blue Cross and Blue Shield are making available new and better policies at a reasonable charge for the oldsters.

We in Arizona, that is, the medical profession and those charged with the responsibilities of administering hospitals, have through this state's Blue Cross-Blue Shield plan been doing something concrete and constructive about the aged for a number of years. In fact, we have engaged in this activity for nearly 10 years.

And just what has this activity been? First, let me say, it has been manifold in conception. For example, where aged people enroll in Arizona Blue Cross-Blue Shield groups they have been eligible for coverage and benefits the same as anyone else regardless of how old they may be. Their ages, or the fact that they might utilize the services more frequently, have in no way affected their rates or placed limitation on their benefits. In other words, they have been eligible for coverage identical to that available to people at younger age levels. So this is prime example Number One of how we have been providing for the aged in our state.

Secondly, we have periodically made non-group enrollment available to Arizona residents under 65 years of age. What this means is that people enrolling before they reach 65 on a non-group basis could continue to carry their Blue Cross-Blue Shield after reaching 65 with no fear of cancellation, no reduction of benefits, or no increase in dues because of their age. It is a fact that many people, leaving their place of employment where they had hospital-surgical-medical coverage other than Blue Cross-Blue Shield, discovered that they had to give up their coverage upon termination or retirement. These same people have come to Blue Cross to get coverage to replace the commercial coverage which they lost.

Thirdly, in this connection, we feel it is pertinent to point out that a Blue Cross-Blue Shield member leaving a group is not terminated by the prepayment plan, but rather is carried as a direct payment member, regardless of his age or the amount of utilization registered against him.

And fourthly, only recently Arizona Blue Cross-Blue Shield has come forth with what is popularly known as a Senior Citizen Certificate. This particular type of coverage is for people over 60 years of age with no age limit whatsoever. This, together with the previous group and non-group coverages, now makes it possible for practically every bona fide resident of the state of Arizona who is in good health to obtain hospital-surgical-medical coverage. At the present time, the senior citizen program is being offered on a semi-annual basis. Our Senior Citizen Certificate has been offered to the general public very recently. It was advertised and promoted extensively, and a healthy response is anticipated.

Various independent insurance systems in industry, labor unions, and private carriers are offering policies for health protection to those aged 65 and over. To achieve a realistic goal, the medical profession will throw itself wholeheartedly behind all co-operative insurance plans whether for hospitalization or medical service. Altogether, we can forsee within the next few years most of the older generation who desire such coverage in possession of such a policy.

Health programs must be continually built from the individual and community level upward. The process need not be slow if the state and public health officers, the medical profession, and insurance industry will do their share and mesh their efforts with those of the hometown folks. With determination, applied intelligence, and constructive effort on every level of government, and between civic and professional leaders, we can continue to improve the health picture for all and make it possible for every American family to obtain the medical service it needs.

The Arizona Medical Association appreciates this opportunity to submit its opinion on this subject.

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symptom complex

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Usual dosage: 2 tablets or teaspoonfuls q.i.d. (equiv. 1 Gm. tetracycline). Each TABLET contains: ACHROMYCIN® Tetracycline HCl (125 mg.); phenacetin (120 mg.); caffeine (30 mg.); salicylamide (150 mg.); chlorothen citrate (25 mg.). Also as SYRUP, caffeine-free.

(1) Estimate based on epidemiologic study by Van Volkenburgh, V. A., and Frost, W. H.: Am. J. Hygiene 71:122, Jan. 1933.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

A NEW EPIDEMIOLOGICAL STUDY OF CANCER

E. Cuyler Hammond, Sc.D.*

MANY specific causes of cancer have come to light by the simple observation of an unusually high incidence of the disease among a group of people exposed to some particular environmental factor. The classic example is the observation made by Percival Potts in 1775 of an extremely high incidence of cancer of the scrotum among chimney sweeps. From this he concluded that heavy exposure to coal soot could cause the disease; and that it could be prevented by reducing exposure.

The subsequent decline in cancer of the scrotum following changes in the method of cleaning chimneys (and the passage of laws prohibiting the use of children as chimney sweeps) is strong evidence that Potts's interpretation of his data was correct. A century and a half later, two Japanese scientists succeeded in producing cancer of the skin experimentally with soot. Subsequent experiments together with epidemiological evidence have shown that prolonged exposure was required (e.g., many years in man or many months in mice). It now appears that the probability of cancer occurring as a result of exposure to a carcinogenic agent depends upon the potency of the agent, the degree of exposure, the duration of exposure, and the susceptibility of the individual.

Since Potts's time, a considerable number of other causes of human cancer have been discovered. These include many different organic and inorganic chemicals as well as prolonged over-exposure to x-rays. In each instance, the discovery resulted from the observation of a high incidence of cancer of some specific site among a group of people, all of whom were exposed to the same agent.

Considering what is already known about causes of cancer in human beings, and considering the circumstances which led to their discovery, there is reason to suspect that many cases of cancer result from exposure to environmental factors not yet identified as carcinogenic for human beings. Once these factors are determined, there is hope of preventing the disease by reducing exposure to the responsible agents just as analine dye workers are now protected from exposure to beta naphthylamine to avoid risk of bladder cancer.

One approach to the problem is to learn as much as possible about the environment, habits and family history of a very large number of people and then ascertain the later incidence of cancer in relation to these factors. By starting with a population of several hundred thousand people in all walks of life, the number of individuals falling into specific exposure groups should be sufficient to yield reasonably reliable cancer incidence rates. If any of these groups have an unusually high incidence of cancer of some specific site, then further studies can be undertaken to determine whether a direct casual relationship exists.

This is the basis for a new prospective epidemiological study being undertaken by the American Cancer Society. It may be described briefly as follows:

Several hundred counties in 25 states, including Arizona, have been selected as study areas. The selection was made in such a way as to give a satisfactory geographic distribution. Cities of various sizes and types as well as rural areas will be included.

In each of these areas, volunteer workers of the American Cancer Society are being trained for the enrollment and tracing of subjects. The volunteers themselves will be so selected as to include all classes of society. Each volunteer will enroll about 10 families (i.e., households) in which there is at least one person over the age of 45. All members of these families who are over the age of 30 will be asked to fill out a questionnaire. In order to keep the information strictly confidential, each subject will put his questionnaire in a sealed envelope for transmittal to the research center. The volunteer workers will not question the subjects and will not be permitted to see the filled-out questionnaires.

The enrollment of subjects began in October 1959 and should be completed within a short time. Once a year thereafter for the next six years, every subject will be traced. Causes of death will be ascertained from death certificates. The physician who signed the death certificate will be requested to supply additional medical information on cases where cancer is mentioned on the death certificate. In addition, once every two years the subjects will be requested to answer a brief questionnaire concerning illnesses occurring during the intervening period.

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*From the Statistical Research Section, Medical Affairs Department, American Cancer Society, New York City, N. Y.

It is hoped that the analysis of the records will yield important clues as to a number of possible causes of cancer.

Two questionnaires will be used, one for men and the other for women. These include sections on general characteristics (age, race, marital status, religion, etc.), family history, history of diseases, physical complaints, habits and exposures of various sorts, and a number of other items. On the form for women, special attention is given to questions relating to the breasts and female genital organs. On the form for men, special attention is given to occupation and occupational exposures. Questions relating to place of residence will be utilized to investigate the possible effects of air pollution. Information on twins in addition to information on family history and on husbands and wives should provide some data on possible inherited factors.

While the major purpose of the study is to investigate factors of possible etiological significance, it is hoped that it will also yield information of value in relation to lay education. The subjects are asked detailed questions about "present physical complaints" and the answers will be analyzed in relation to cases of cancer diagnosed in the subsequent several months. In order to avoid biasing the subjects, questions are asked about physical complaints which are probably not related to cancer as well as about complaints which may be symptomatic of cancer. Assuming, as is probable, that positive answers to certain of these questions are highly related to the presence of cancer, the data should be of value in persuading people with such complaints to see their doctor immediately. The aim, of course, is to reduce the factor of "patient delay" in the diagnosis of cancer.

The Arizona Division of the American Cancer Society is participating in the study. Nationally, it is planned to enroll about 500,000 families if possible. About 9,000 of these will be enrolled in Arizona.

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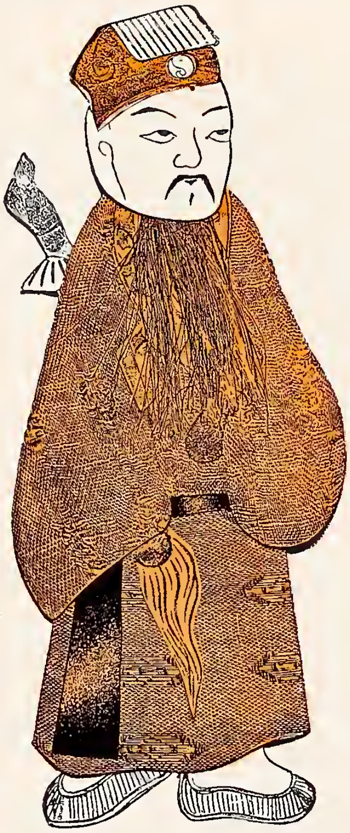

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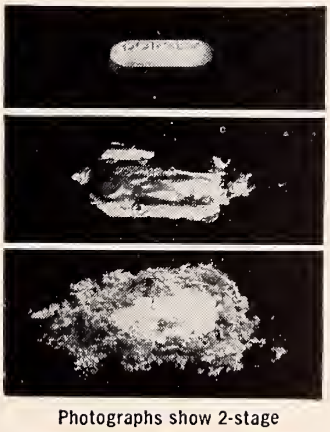
Buffered Pabirin is formulated to provide high and sustained salicylate blood levels. Each tablet consists of an outer layer containing a buffer (aluminum hydroxide), para-aminobenzoic acid, and ascorbic acid; a core of acetylsalicylic acid.

In the stomach, the outer layer quickly releases the buffer, which protects against nausea, dyspepsia and other gastrointestinal symptoms so frequently encountered with salicylates alone. The core of Buffered Pabirin then disintegrates rapidly, permitting rapid absorption of the acetylsalicylic acid for faster pain relief.



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Acetylsalicylic acid (5 gr.)	300 mg.
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Dried aluminum hydroxide gel	100 mg.

All Buffered Pabirin is sodium- and potassium-free.

Dosage: Two or three tablets 3 or 4 times daily.

References: 1. Hart, D.; Bagnall, A. W.; Bunim, J. J., and Polley, F. H.: Ninth International Congress on Rheumatic Diseases, Toronto, Ont. (June 25) 1957. 2. Report of Joint Committee, Medical Research Council & Nuffield Foundation, Treatment of Rheumatoid Arthritis, British Medical Journal (April 13) 1957. 3. Friend, D. G.: New England J. Med. *257*:278 (Aug.) 1957.

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MEDICARE

IN the presence of much talk, speculation, and news reports on the potential restoration of benefits to the Medicare program, we should like to clarify the status of this situation and furnish you with preliminary guidance on that subject.

In this regard, it may come to your attention, through news media, that certain Medicare benefits will be restored to the program. Some of these news releases will also indicate that the restoration of care will become effective Jan. 1, 1960. However, despite such positive announcements on the restoration of care, no final or definitive action has developed which would permit us to confirm this information at this time. Nevertheless, we are optimistic that such changes in the program will be made. This possible restoration of care has been the topic of serious study and consideration for some time. As discussed and considered, this re-establishment would approximate, with certain refinements, the same services authorized under the program prior to Oct. 1, 1958.

The secretary of defense, by authority of the act, is empowered to reinstate those provisions of care as they existed prior to Oct. 1, 1958. However, we feel it appropriate to advise that any such reinstatement of care properly should, and must, coincide with the desires and intent of the congress, and agreeably comply with the budgetary considerations that inherently affect the scope and operation of the Medicare program. In addition, complete staffing within the uniformed services must be effected. It is, therefore, necessary for us to currently refer to this subject primarily as a probability, the materialization of which is dependent upon many factors.

In any event, we might point out that there is no doubt that the Medicare permit system, inaugurated as part of the Oct. 1 changes, will be permanently retained as an operational requirement for those dependents residing with their sponsors. Experience has proved this system to be a satisfactory measure in the promotion of optimum utilization of uniformed services medical facilities, an objective often expressed by members of the congress in hearings and discussions on this program.

May we assure you that, when any reinstatement of care is officially announced, your office will be promptly apprised of this development, and detailed information will be furnished at the earliest moment.

We indeed appreciate your most capable assistance in administratering Medicare which, through co-operative effort, can only result in further advancing achievement of mutual goals in a continuing efficient and successful program.

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A NEW AND USEFUL REGISTRY OF BLOOD DYSCRASIAS

THERE has been established by the American Medical Association a registry of blood dyscrasias. This registry is interested in receiving reports which concern patients who have developed a blood dyscrasia within six months after having received a drug or toxic agent. This will provide a cumulative experience which may serve as an early warning to physicians. Summaries will be distributed semi-annually. Doctors are urged to submit pertinent case reports.

BRIEFS FROM THE NEW PHYSICIAN

TB — A SERIOUS PROBLEM OF MEDICAL STUDENTS

ALTHOUGH medical students have no special affinity for tuberculosis germs, the disease itself has been a serious problem in young doctors for hundreds of years.

There are many theories as to why there is so much tuberculosis among medical students and new doctors. Writing in the September *New Physician,* journal of the Student American Medical Association, Dr. J. Arthur Myers said one suggestion is that students of medicine, unlike other students, "break up their general strength by the intensity of their application to study." Along with a generally run-down condition, there is a greater possibility of exposure to the disease in hospitals, and in caring for sick patients.

Dr. Myers quoted Dr. G. M. Meade, last executive director of the Trudeau Sanitarium in New York, who stated that from 1929 to 1953, of nearly 7,000 patients admitted to the hospital for the first time, almost 10 per cent were medical students and physicians.

As far back as Aristotle's time (384 BC) reference was made to the contagiousness of tuberculosis. John Keats, surgeon as well as poet, died from tuberculosis at the age of 25. Xavier Bichat, the man who discovered the structure of our body cells, died of the disease in 1802 when he was only 31. Edward Livingston Trudeau, after whom the famous sanitarium was named, developed tuberculosis as a medical student in 1870.

Dr. Myers wrote, "Apparently, present antituberculosis drugs only suppress tubercle bacilli, and therefore do not cure the disease in the strict sense. It appears that when drugs are withdrawn, the bacilli revive and possess the same potentialities as before drugs were administered." These drugs can do the most good, however, if given early in the disease.

Of greatest importance, Dr. Myers emphasized frequent tuberculin skin testing so that cases would be detected early enough for drug administration to be effective.

Dr. Myers is past president of the American College of Chest Physicians and the National Tuberculosis Association. Since 1932 he has directed the chest disease work of the student health service at the University of Minnesota medical and graduate schools.

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A NEW MEDICAL CENTER

is scheduled to be constructed soon at the southwest corner of 30th Street and East Thomas Road. There will be custom facilities for about 25 doctors. The owners will furnish all services. Two elevators and parking facilities will be supplied.

The new 96 bed doctor's hospital at 20th Street and East Thomas is scheduled to commence construction by November 1, 1959, the 52 acre Tower Regional Shopping Center at 36th Street and East Thomas is nearing completion.

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PHILOSOPHY AND ETHICS DECLINING IN SCHOOLS, NEEDED IN OUR DAILY LIVES

PHILOSOPHY and ethics, better known as thinking and morality, have deteriorated in our school environment during the last half century. Of interest, the loss of these value judgments has coincided with the rise of the materialistic application of science.

In an editorial in the September *New Physician,* published by the Student American Medical Association, Dr. Chauncey D. Leake, president-elect of the American Association for the Advancement of Science and assistant dean of Ohio State University Medical School, stated that ethics seem to have dropped out of social consideration. He said, "What social value has our science if it is applied so successfully to the possibility of destroying us all?"

Dr. Leake invented a new word – *biad* – for referring to the two arms of intellectual effort that must be kept in balance. These are science and the humanities, in contrast to the old Greek triad of logic, ethics, and the esthetics. He then went on to say, "The failure of our ethics appears in our distressing dilemma of decision; shall we use nuclear power in our arrogant threats – in daring mutual destruction, or shall we use it for the peaceful benefit of all people?"

In suggesting that we would all benefit if philosophical considerations and discussions were made more a part of our daily lives and activities, Doctor Leake wrote that our rapidly growing knowledge about ourselves and our environment must be balanced by an equal growth in attaining the good and beautiful.

SYMPOSIUM — CONGENITAL HEART DISEASE

Deborah Hospital announces the Second International Symposium on Changing Concepts in Medicine (congenital heart disease) to be held at the Bellevue - Stratford Hotel in Philadelphia, Pa., on April 28-30, 1960.

The symposium is being organized under the direction of a national committee headed by Dr. Charles P. Bailey, chairman of the medical board of Deborah Hospital. Eminent clinician-educators will lead panel discussions encompassing all aspects of congenital heart conditions and the selection of patients for surgical corrections.

Inquiries about the symposium should be addressed to: Dr. Charles P. Bailey, The Deborah Hospital, Browns Mills, N. J.

THE ARIZONA MEDICAL ASSOCIATION, INC.

LOCATION OPPORTUNITIES

ASHFORK – Population 700. North centrally located – Railroad center. Contact the Women's Club, Ashfork, Ariz.

CAMP VERDE – Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Ariz.

EL MIRAGE – Population 2,000 – including the trading areas of Surprise, Youngtown, Peoria and Luke Air Force Base the population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving, with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available and in the area surrounding El Mirage from Glendale (9 miles) to the east, and Wickenburg (35 miles) to the west there are only two doctors to serve this community. The need for an M.D. and/or surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Ariz.

ELOY – Need a doctor of medicine, preferably a GP. Population of 4,000 in farming community with several small towns near by. Located approximately midway between Phoenix and Tucson. Contact Howard H. Holmes, M.D., Eloy Medical Center, Eloy, Ariz.

GILA BEND – Population 2,500 – 80 miles west of Phoenix. Nearest town to the Painted Rock Dam project. Good opportunity for GP. Cattle, cotton and general farming. Office and equipment available. $150 monthly income from board of supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

GLOBE – Population 10,000, including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about one hour by car from either Tucson or Phoenix. No ENT man in the area, etc. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad St., Globe, Ariz., or Ellis L. Pollock, M.D., Miami Inspiration Hospital, Miami, Ariz.

GRAND CANYON – Population approximately 4,000 – Elevation 7,000 feet. Excellent opportunity for GP-GS. Hospital plant consists of a partially equipped building, having 4,000 square feet of floor space and containing reception room, doctor's office, treatment room, X-ray room, operating room, employe lounge, kitchen and five 2-bed ward rooms. Six-room house with three bedrooms available for doctor. Climate is pleasant; the summers are mild, and winters are not severe. Elementary and a fully accredited high school. Catholic, Protestant and L.D.S. religious services are conducted. For further information, contact John S. McLaughlin, Superintendent U.S. Department of the Interior, National Park Service, Grand Canyon National Park, Grand Canyon, Ariz.

HAYDEN – Population 3,000/4,000 – industrial practice. Approximately 200 employes and dependents. Only part-time required. Coverage; Metropolitan Surgical Plan. Physician may engage in private practice also. Small company-owned clinical building (new) available for use, with X-ray equipment, diathermy equipment, etc. Full-time nurse available to assist; clerical work to be handled by company. Company housing facilities available for physician–small rental. Contact Mr. Ben Roberts, American Smelting & Refining Company, P.O. Box 1111, El Paso, Texas.

TOLLESON – In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 9117 W. Van Buren Street, Tolleson, Ariz.

TUCSON – The VA Hospital is in urgent need of an orthopedic surgeon. They prefer someone who is board certified, but would take someone who has had special training, as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact, S. Netzer, M.D., Director, Professional Service, VA Hospital, Tucson, Ariz.

VA HOSPITAL – FORT BAYARD, N. M. – In the process of recruiting for physicians to join the staff of this 222-bed general medical and surgical hospital. Specifically interested in physicians specializing in internal medicine or surgery. Contact, Glenn O. Smith, Chief, Personnel Division, VA Hospital, Fort Bayard, N. M.

FOR INFORMATION ON OPPORTUNITIES IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Ariz.

Carl H. Gans, M.D., Phelps Dodge Hospital, Morenci, Ariz.

Ira E. Harris, M.D., Miami Inspiration Hospital, Miami, Ariz.

Charles B. Huestis, M.D., Box 928, Hayden, Ariz.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Ariz.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Ariz.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Ariz.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Ariz.

LOCATION INQUIRIES RECEIVED DURING THE MONTH OF AUGUST 1959

CARTER, LAURA J., M.D., 190 State Road, Grant, Mich.; *GP*; 1952 graduate of University of Iowa; interned at Edward W. Sparrow Hospital in Lansing, Mich.; interested in private or associate practice; married; age 35; available February 1960.

CIOLA, LOUIS FRANCIS, M.D., 591 Roycroft Blvd., Buffalo 25, N. Y.; S; 1943 graduate of the University of Buffalo School of Medicine; interned at Allied Hospitals of Sisters of Charity in Buffalo; served residency at Buffalo General Hospital, Children's Hospital of Buffalo and Buffalo VA Hospital; holds license in State of New York; fulfilled military obligations; interested in clinic, assistant or associate practice; married; age 41; available November 1959 – (will need one month's notice).

CRAWLEY, EUGENE HARVEY, M.D., 5514 West Markham St., Little Rock, Ark.; *Pd*; graduate of University of Arkansas in 1944; interned at St. Vincent's Infirmary in Little Rock; served residency at Children's Hospital in Birmingham,

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Indications: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, mild spondylitis, myositis, fibrositis, neuritis, and certain muscular strains.

Dosage: Average initial dosage: 2 capsules 3 or 4 times daily. Maintenance dosage to be adjusted according to response.

Precautions: All precautions and contraindications traditional to corticosteroid therapy should be observed. The amount of drug used should be carefully adjusted to the lowest dosage which will suppress symptoms. Discontinuance of therapy must be carried out gradually after patients have been on steroids for prolonged periods.

Each ARISTOGESIC Capsule contains:

ARISTOCORT® Triamcinolone	0.5 mg.
Salicylamide	325 mg.
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Ala.; holds license in State of Arkansas; interested in group or commercial practice; married; age 41; available immediately.

CURTIS, ROGER W., M.D., 1011 Steele, Denver 6, Colo.; *GP*; 1958 graduate of Colorado Medical School; interned at U.S. Public Health Hospital in Seattle, Wash.; holds license in State of Colorado; fulfilled military obligations; interested in group of associate practice — would consider public health or epidemiology; married; age 35; available October 1959.

DEAN, ROBERT D., M.D., 129 Colonial Circle, Jackson 6, Miss.; *Ob-Gyn*; 1951 graduate of Johns Hopkins; interned at Charity Hospital in New Orleans; served residency at University Hospital in Jackson; holds license in State of Mississippi; fulfilled military obligations; interested in group, associate or partnership practice; married; age 35; available immediately.

DOWNS, EDWARD R., M.D., 300 South Hamlin, Apt. 5B, Chicago 24, Ill.; *I*; 1954 graduate of George Washington University School of Medicine; interned at Presbyterian Hospital in Chicago; served residency at Presbyterian Hospital, University of Illinois Research and Educational Hospital, and St. Lukes Hospital — all in Chicago; fulfilled military obligations; holds license in State of Illinois; interested in small group or associate practice; married; age 31; available immediately.

EKLUND, GERALD G., M.D., 879 Killarney Drive, Pittsburgh 34, Pa.; *GP*; 1956 graduate of the University of Minnesota; interned at U.S. Public Health Service in Baltimore, Md.; served residency at E. S. Magee in Pittsburgh, Pa.; holds license in State of Minnesota; fulfilled military obligations; interested in group or partnership practice; married; age 27; available immediately.

HAMMACK, WILLIAM JACKSON, M.D., 3224 Finch Drive, San Jose 23, Calif.; *Ob-Gyn*; 1954 graduate of Medical College of Alabama; interned at Colorado General Hospital in Denver; served residency at Santa Clara County Hospital in San Jose; holds licenses in states of California and Alabama; fulfilled military obligations; interested in association or group practice; married; age 30; available immediately.

HOCHMAN, RICHARD I., M.D., 37 Badger Road, Annapolis, Md.; *I*; 1952 graduate of NYU-Bellevue College of Medicine; interned at Hospital for Joint Diseases in New York City; served 1st year residency at Hospital for Joint Diseases, 2nd and 3rd years at USN Hospital in St. Albans, N. Y.; holds license in State of New York; will have completed six years active duty with USNR as of Sept. 22, 1960; interested in group, associate or private practice; married; age 31; available Oct. 1, 1960.

HUGHES, ROBERT JAMES, M.D., 419 Davis Ave., Elkins, W. Va.; S; 1940 graduate of Long Island College; interned at Brooklyn Hospital; served residency at St. Vincent's Hospital and Maumee Valley Hospital both in Toledo, Ohio; holds licenses in states of New York and Maine; fulfilled military obligations; interested in associate practice; married; age 43; available immediately.

JOSEPH, ROBERT HENRY, M.D., 2520 Dalton Ave., Ypsilanti, Mich.; *GP*; 1954 graduate of the University of Michigan; interned at Mt. Carmel Mercy Hospital in Detroit; served residency at University Hospital in Ann Arbor; holds license in State of Michigan; fulfilled military obligations; interested in group, associate or private practice; married; age 31; available July 1960.

MILLER, EDWARD A., M.D., 725 Muirlands Vista Way, La Jolla, Calif.; *GP*; 1936 graduate of Washington University School of Medicine; interned at St. Louis City Hospital; served residency at St. Louis City Hospital and West Oklahoma TBC & Charity Hospitals; holds licenses in states of Missouri, Arizona, and California; fulfilled military obligations; interested in group practice — student health, teaching anatomy, tuberculosis, insurance; married; age 52; available approximately October 1959.

REED, MARGARET A., M.D., 1914 Haggin Ave., Anaconda, Mont.; *GP*; 1951 graduate of Creighton Medical School; interned at St. Lukes Hospital in San Francisco; holds licenses in states of California, Montana and Nebraska; interested in associate practice; married; age 34; available December 1959.

REED, DON R., M.D., 1914 Haggin Ave., Anaconda, Mont.; *GP*; 1951 graduate of the University of Nebraska Medical School; interned at St. Lukes Hospital in San Francisco; holds licenses in states of California, Montana, Nebraska; fulfilled military obligations; interested in group or associate practice; married; age 39; available December 1959.

ROSENBAUM, WILLIAM H., M.D., 655 Kincaid Ave., Highland Park, Ill.; *Medical Director;*

1941 graduate of Chicago Medical School; interned at Highland Park Hospital; holds license in State of Illinois; fulfilled military obligations; interested in medical director practice; married; age 46; available immediately.

SILVERNAIL, JR., WILLIAM I., M.D., USAF Hospital Tachikawa, APO 323, San Francisco, Calif; *NS*; 1951 graduate of New York Medical College; interned at Ellis Hospital in Schenectady, N. Y.; served residency at University of Virginia Hospital in Charlottesville, Va.; holds license in State of New York; interested in group or associate practice; married; age 33; available – "pending the location of position, it will require about 90 days for processing resignation."

SLIMP, THOMAS E., M.D., 232 West Livingston Place, Metairie, La.; *D*; 1950 graduate of Syracuse Medical School; interned at Santa Barbara College Hospital in California; served residency at Louisiana State University and Charity Hospital in New Orleans, La.; holds licenses in states of California, Indiana and Louisiana; fulfilled military obligations; interested in group, associate or private practice; available Jan. 1, 1960.

WHALEN, JOHN THOMAS, M.D., P.O. Box 356, Whitefish, Mont.; *GP*; 1943 graduate of St. Louis University; interned at St. Mary's Hospital in San Francisco; holds licenses in states of Missouri, Montana and California; fulfilled military obligations; married; age 41; interested in group or industrial practice; available November 1959.

WORTSMAN, LESTER, M.D., 2600 Alameda, Vallejo, Calif.; *I*; 1951 graduate of Hahnemann Medical College; interned at Queens General Hospital; served residency at Mt. Sinai Hospital in Cleveland and Kings County Hospital in Brooklyn; holds licenses in states of New York, Kentucky and New York; single; age 33; interested in group or associate practice; available – "one month's notice."

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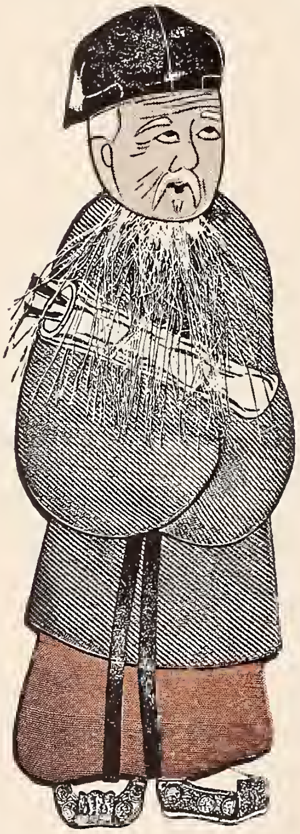

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1. Kuzell, W. C., and others.: Arch. Int. Med. 92:646, 1953. 2. Wolfson, W. Q.: J. Michigan M. Soc. 54:323, 1955. 3. Strandberg, B.: Brit. J. Phys. Med. 19:9, 1956. 4. Platt, W. D., Jr., and Steinberg, I. H.: New England J. Med. 256:823 (May 2) 1957.

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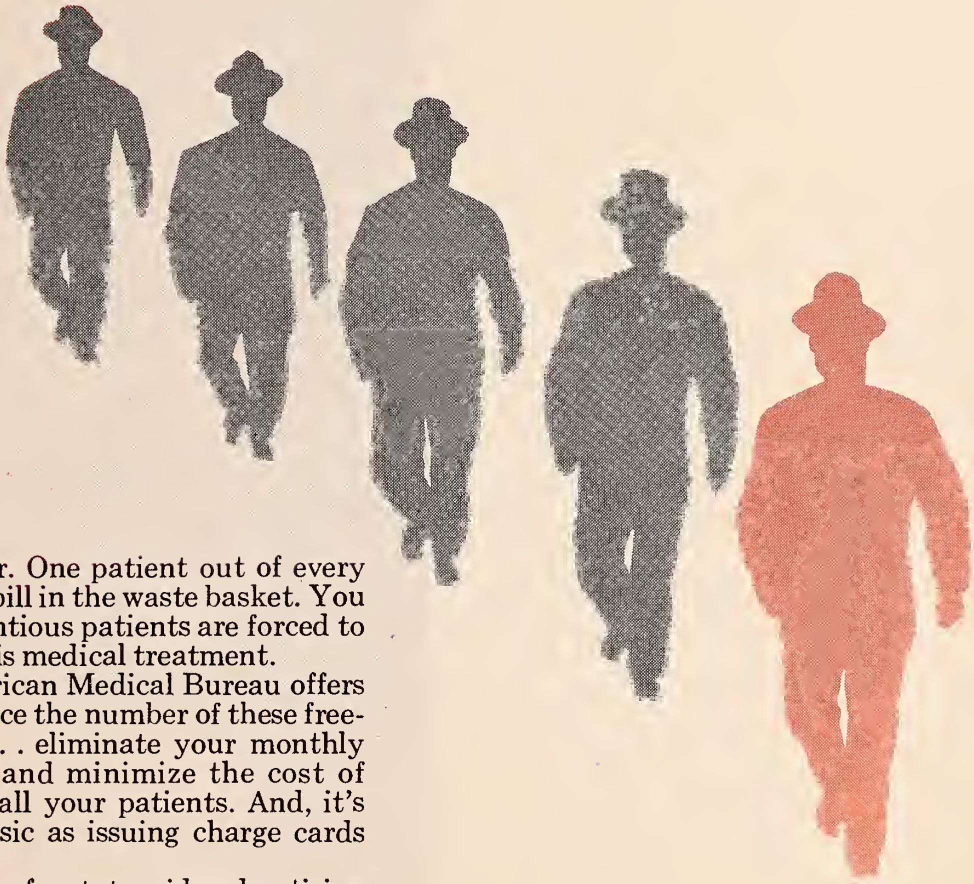

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THE ARIZONA MEDICAL ASSOCIATION, INC.

BOARD OF DIRECTORS

MEETING of the Board of Directors of The Arizona Medical Association, Inc., held Sunday, June 21, 1959.

CHAIRMAN 1959-60

Doctor Steen placed in nomination the name of Doctor Smith as Chairman of the Board for the ensuing fiscal year 1959-60. Doctor Hileman seconded the nomination.

It was moved and seconded that the nominations be closed, the Secretary declaring Doctor Smith unanimously elected Chairman of the Board for the fiscal year 1959-60.

MINUTES

It was moved, seconded and unanimously carried that the reading of the minutes of the meeting of Council, (the former designated name of this Board), be dispensed with and the same be approved as printed and circulated among the members.

COMMITEE MEMBERSHIP APPOINTMENTS

Committee appointments were recommended by Doctor Melick, in accordance with the current By-Laws of the Association, as adopted by its House of Delegates in meeting held May 2, 1959.

FINANCIAL REPORT — 1959 ANNUAL MEETING

Doctor Yount presented his financial report on the 1959 Annual Meeting, for the Board's review and approval, as follows:

EXPENDITURES

Telephone & Telegraph		$ 74.92
Mimeographing		739.51
Exhibits		1,515.75
Entertainment		5,889.95
Scientific Assembly	$3,661.06	
Addition not paid to date	370.38	4,031.44
Miscellaneous:		
Registration Supplies	$ 75.00	
Post Cards	90.00	
Post Card Printing	21.27	
Post Card Mailing	118.00	
Programs	658.13	
Past President's Award	27.50	
50 Year Club Awards	76.25	
Bulletin Typewriter Rental	20.00	
Refunds	26.75	
Checks Returned	61.50	
Articles & By-Laws Notice and Publication	16.23	
Hotel Expenses — Staff	376.75	
Hotel Expenses — Reporter	105.77	
Kelton Employees — Restaurant	12.12	
Gratuities	60.00	
Executive Secretary Expense	4.62	
Council Meetings	228.50	1,978.30
Total Expenditures to date		$14,229.96

RECEIPTS

Technical Exhibits (to 3/31/59)	$ 6,550.00
Scientific Exhibits (to 3/31/59)	8.00
Technical Exhibits (after 4/1/59)	500.00
Scientific Exhibits (after 4/1/59)	8.00
Registration, Breakfast, Luncheon, Dinner Dance and other reimbursements	5,723.04
Total Receipts	$12,789.04
DEFICIT	$ 1,440.92
BUDGETED	$ 2,000.00

1960 ANNUAL MEETING ARRANGEMENTS — SCIENTIFIC ASSEMBLY COMMITTEE

DOCTOR BEATON: In preparation for the deliberations about the arrangements of the 1960 Annual Meeting, you have all received the questionnaire that was sent out. I sent it out without prior authorization of the Board of Directors, mostly because I felt I had to have this information before the meeting of this Board, and certainly I would have to have it before the meeting of the Scientific Assembly Committee which I will hope to hold within two weeks. I sent it out in this form in the belief that we could get as much information as possible.

Also, the Central Office has made a survey of possible meeting sites in the Phoenix area for the meeting. You will remember that the House of Delgates voted to meet in the Phoenix metropolitan area.

The answers to the questionnaire are of some interest in making your determination in that out of 286 questionnaires received to date, 178 or a large majority is in favor of a resort-type of hotel; whereas, less than half that many, 83, are in favor of a large city hotel and 25 signify no choice. I presume that this would have some impact on the thinking of the Board with regard to the type of hotel that you will pick here in Phoenix.

I don't know that the answers to the other questions have any pertinence at this time but just to give them to you for what interest there may be in determining where you're going to hold it: (a) on the question of whether you want longer or shorter scientific meetings, it's been about equal, about a third wanted longer, a third wanted shorter and a third said they wanted no change; (b) on the question of longer or shorter papers, there is a distinct trend in the interest of shorter papers or no change, certainly very few wanted longer papers; (c) there was a heavy predominance of more panel-type discussions; (d) there was a heavy predominance in favor of more presentations of practical interest in every day clinical practice; (e) when we came down to the aspects of the program that people wanted more stress laid on, it was very interesting that a very heavy predominance was in favor of more stress placed on the scientific sessions; and (f) there was no particular stress on social or cultural activities but there was a heavy vote against athletic and sporting activities. So presumably when you think about this, it is not entirely necessary that you pick a place with a golf course. I have not yet tabulated these on special topics, and so on, thinking that these are matters for the Scientific Assembly Committee. Those are the reports I have for you and I would like Bob Carpenter, if he would at this time, to go over this survey of possible sites because I see that the first item on this part of the agenda is the actual location.

LOCATION

Considerable discussion was held on the question of location for the 1960 Annual Meeting, it being pointed out that the House of Delegates had passed a resolution that due deliberation be given to a location with adequate refrigeration. Establishments surveyed and included for discussion were the Arizona Biltmore, Camelback Inn, Mountain Shadows, Ramada Inn, Safari Hotel, San Marcos Hotel, Valley Ho Hotel and the Westward Ho Hotel.

It was moved, seconded and unanimously carried that the Board of Directors recommend to the Scientific Assembly Committee that the Safari in Scottsdale be considered for our 1960 Annual Meeting.

DATES

It was moved, seconded and unanimously carried that the dates for the Annual Meeting be from May 4 to May 7, 1960, inclusive.

It was determined dates of the Board of Directors Meeting, First and Second Sessions of the House of Delegates, Golf Tournament, President's Dinner Dance, Receptions and Buffet Supper be decided by the Scientific Assembly Committee, in accordance with the By-Laws.

FEES

It was determined that the fees for registration and technical exhibits remain the same at $10.00 and $150.00 respectively.

MEMBERSHIP CLASSIFICATION CHANGES
YUMA COUNTY MEDICAL SOCIETY

It was moved, seconded and unanimously carried that the Board approve Associate membership, dues exempt, on the basis of active military service, retroactive to January 1, 1959, for Kenneth H. Reichardt, M.D., in accordance with recommendation of the Yuma County Medical Society.

COMPLIANCE WITH BY-LAWS –
AUTOMATIC CHANGES

It was moved, seconded and unanimously carried that we comply with the new By-Laws and change from "Service" to "Associate," the membership classification of the following doctors:

Maricopa County Medical Society

Clinton A. Holt, M.D. (Military) Dues Exempt
Charles L. von Pohle, M.D. (Military) Dues Exempt

Pima County Medical Society

Raymond C. Spaulding, Jr., M.D. (Military) Dues Exempt
Wayne E. Truax, M.D. (Military) Dues Exempt

Yuma County Medical Society

Victor G. Benson, M.D. (Military) Dues Exempt

Pinal County Medical Society

James M. Walsh, M.D., by letter dated May 5, 1959, expressed to the Association his deep appreciation for the 50-Year Club award presented to him during the recent Annual Meeting.

Massachusetts Medical Society

Robert W. Buck, M.D., Secretary, The Massacusetts Medical Society, by letter dated May 6, 1959, sought reciprocal consideration in the matter of annual membership dues abatement in the instance of member relocation.

It was moved, seconded and unanimously

carried that we advise them that our By-Laws do not so provide; therefore, we are unable to accept their suggestion.

MEDICAL ECONOMICS COMMITTEE

Medicare Contract — Supplemental Agreement Execution

For the record, a supplemental agreement to the Medicare Contract (No. DA-49-007-MD-806), deleting for this Association the requirement of maintaining certain specified insurance coverage, was executed by its officers.

FEE AND CONTRACTURAL MEDICINE COMMITTEE

INDUSTRIAL COMMISSION OF ARIZONA INDUSTRIAL FEE SCHEDULE — RELATIVE VALUE FACTOR — 450

Presented for Board review were the letters received from the Industrial Commission of Arizona, dated April 30, 1959, and May 11, 1959, proposing an increase in the relative value factor applicable to the Industrial Fee Schedule.

Doctor Beaton reported on and submitted the recommendations of the Fee and Contractual Medicine Committee acted upon in its meeting held last evening, June 20, 1959, as follows:

1. That the Board of Directors accept, as a basis for a new Industrial Commission Fee Schedule, the following relative value factors:

Surgery	— 450
Medicine	— 500
Radiology	— 500
Pathology	— 450
Anesthesiology	— 500

2. That in the future, the fee schedule (medical, surgical, etc.) of the Industrial Commission be renegotiated whenever and at the same time its hospital schedule is renegotiated;

3. That we go on record contrary to the statement of the Industrial Commission, i.e., that the 450 factor would meet with our approval; that there was no prior agreement that certain routine charges, as for initial visit, hospital visit, etc., would not be charged; and that we recommend that the routine charges which are listed under "Medical" services in the relative value schedule be raised to 500 (factor) like the rest of medical services;

4. That the Industrial Commission understand that more use will be made of Code No. 0028 which provides for a fee of $15.00 for initial examination and complete history; and

5. That the Committee feels that in the future, its functions should be continued as a subcommittee of the Medical Economics Committee.

It was moved, seconded and unanimously carried that we accept the committee (Fee and Contractual Medicine) report; that we negotiate further with the Industrial Commission on the basis of this proposal; and, that the (Arizona) Medical Association request opportunity to renegotiate each time the hospitals do.

FEE AND CONTRACTUAL MEDICINE COMMITTEE

VA FEE SCHEDULE MEDICAL SERVICES — OUTPATIENTS

The Board reviewed the report of the Fee and Contractual Medicine Committee pertaining to repeated requests of the Veterans Administration before it for a VA Fee Schedule for outpatient medical services. The Committee went on record as rejecting the latest schedule presented by Seymour Fisher, M.D., Manager, VA Hospital, Phoenix, and recommends to Council (now this Board of Directors) that a plan be formulated based on the unit value of 500 for medicine and 475 for surgery.

It was moved, seconded and unanimously carried that we table this matter pending review of resolution (regarding non-participation in government contracts) adopted by the House of Delegates (May 2, 1959).

Yuma County Medical Society

BLUE SHIELD PAYMENTS TO OSTEOPATHS — PROTEST

The Yuma County Medical Society, by letter dated May 11, 1959, lodged formal protest regarding "the manipulation of the By-Laws of Blue Shield to allow payment of osteopaths."

It was moved, seconded and carried, that this be referred to Blue Shield.

PROFESSIONAL COMMITTEE

CERVICAL WHIPLASH INJURIES

The Board reviewed the recommendations of the Professional Committee dealing with Cervical Whiplash Injuries, "that the State Association in its next scientific meeting consider a panel of able individuals in the various branches of medicine to touch on this problem to help clarify it both medically and medico-legally and give at least some information with respect to guiding doctors in using the term or clarifying the term in court."

It was moved, seconded and unanimously carried that this be referred to the Scientific Assembly Committee.

NORTH MOUNTAIN HOSPITAL —

PHOENIX – INSPECTION

At a meeting of the Professional Committee held May 17, 1959, Doctor Clarence G. Salsbury, Commissioner of the Arizona State Department of Health, expressed the desire that a professional inspection of North Mountain Hospital, Phoenix, be made. The Committee determined to recommend to the Board of Directors that it authorize or direct the Professional Committee to send a representative group of its body to evaluate the hospital in question, in an endeavor to answer the questions posed by the Health Department and thereafter, following inspection and study, submit its recommendations to the Board. It was further suggested that Doctors Norman A. Ross, Robert B. Leonard and T. Richard Gregory undertake the inspection, they to confer first with Doctor Salsbury as to the specifics.

It was moved, seconded and unanimously carried that we endorse the inspection, as proposed by the Professional Committee.

THE NATIONAL FOUNDATION – POLIO IMMUNIZATION

The following resolution, adopted by the Professional Committee, was reviewed by the Board:

"WHEREAS, the value of The National Foundation and its program for the treatment of polio and development of polio vaccine is recognized as a great service to the health of the Nation, fully appreciated by the medical profession of this State; and

"WHEREAS, it is reported that 56% of the people of our country have had no vaccine immunization whatsoever; and

"WHEREAS, the previous Michigan and New Jersey polio epidemics have shown the danger of the 'hard core' areas wherein people have not availed themselves of vaccine immunization because of apathy, fear and delay but not of finances; and

"WHEREAS, it is the feeling of many that it will be a long time before the problem of polio is fully resolved; now, therefore, be it

"RESOLVED, (1) that we suggest the primary effort of The National Foundation should be towards a continuation of its polio program; (2) that any surplus monies it may have now or may acquire in the future be appropriated for use only to supplement financially and advisorily the efforts of existing, well organized and working groups interested in the eradication of other diseases in which The National Foundation has or may develop interest, thereby preserving and respecting the autonomy of such groups; and (3) that there appears no need for organizational duplication and effort; and be it further

"RESOLVED, that the Association continue and increase its efforts, through its component societies and with the cooperation of the public health departments, to fully support the polio vaccine immunization program to the end that not only pre-school children, school children and young adults receive the polio vaccine inoculations, but that all age groups up to at least age 40 be so immunized; and that adequate publicity be given to stimulate public interest in and acceptance of this most worthwhile project."

Georgianna Johnson, Arizona Representative, The National Foundation, by letter dated June 9, 1959, reported that as a result of exhaustive surveys and discussion during the past year, The National Foundation is announcing a *new* polio patient aid program, to take effect immediately, a copy of the Broadened Chapter Patient Aid Program being submitted for the information of the Association. Physician's and Surgeon's fees will no longer be paid by the Foundation's County Chapters, it being determined, with overwhelming medical support, that the collection of a fee for professional services should properly be a matter between the doctor and his patient, eliminating interferences in the doctor-patient relationship.

It was moved, seconded and motion lost, by a show of hands, that we table the recommendations of the Professional Committee.

It was moved by Doctor Beaton, seconded by Doctor Melick and carried, thirteen members voting in favor and three against, that we adopt those portions of the resolution which urge the extension of the inoculation program to protect the population against polio, leaving out those portions of the resolution which contain any criticism of the Foundation policy in other diseases.

PROBLEMS OF AGING

The Professional Committee again recommends to the Board of Directors, associate with the establishment, by the Governor, of a state "Committee on Aging and the Aged": (a) that the Association take such steps within its power to promote the interest and realization of voluntary health insurance for the elderly through Blue Shield and private insurance carriers; (b) that the Association and County Societies again be apprised of the importance and far-reaching significance of the undertaking of activities in the field of aging at the state and local levels; (c) that the Board of Directors expedite stimulation of interest in the individual and his family in a program for retirement, through legislative means, newspapers, etc., in a public relations program; (d) that the Association give all reasonable cooperation to the national program, etc., towards accomplishing the expressed aim of this movement, reserving our own final commitment to conform to the best interests of the aged in this state.

DOCTOR HAMER: At the meeting in Washington, they must have had between four and five hundred people there and most of them were not doctors, although quite a number of the Delegates to the AMA meeting were routed through there. In order to give those in attendance some idea of what these Congressional leaders and also the Governor of New Jersey are thinking, both of our noon meetings were addressed, one by a politician from Rhode Island who is author of a bill similar to the Forand bill, and the other by the Governor of New Jersey who just couldn't see how in the world anybody after age sixty-five was ever going to be able to provide medical care for himself, except for the government. He already has an active committee working in New Jersey. I think the strongest and most forceful speech delivered before the assembly was by the President of the Health Insurance Council, who is President of the Woodmens Insurance Company of Omaha, Nebraska. He laid it on the line. If I were to review for you the proceedings, even the highlights, it would take the rest of the afternoon.

I think the Professional Committee should, of course, appoint the chairman, and then let that Committee (Subcommittee on Aging) be enlarged to carry out definite functions that will be coming before us at the state Association level, because there will be a lot of meetings held, before that White House Conference, right here in the State. These should have representation.

It was moved, seconded and unanimously carried, in that Doctor Hamer has already attended the Washington conference, that we send him to Ann Arbor and pay his expenses.

DOCTOR HAMER: Following the Ann Arbor meeting, I would like to draft a report, including my recommendations, and Bob (Carpenter) can get it out to the Board.

It was moved, seconded and unanimously carried that we recommend to the Chairman of the Professional Committee that he enlarge his Subcommittee on Aging to include several members.

Presented and read was a letter received from Pat McNamara, United States Senator, Chairman of a Subcommittee on Problems of the Aged and Aging, established through the Senate Committee on Labor and Public Welfare (by virtue of Senate Resolution 65), which is authorized to undertake a comprehensive study of all of the questions relating to the aged and aging. Advice and counsel is sought.

PG COURSES – PEDIATRICS

The Professional Committee recommends to the Board of Directors that favorable consideration be given to the proposed teaching seminar suggested by Charles A. Tompkins, M. D. (Pd) of Tucson (a two-week postgraduate course offered to general practitioners and pediatricians on the subject of Pediatrics, a comprehensive approach to child care, including emotional and physical development, possibly sponsored by a pharmaceutical or formula house); and that serious consideration for this type of meeting be given to such presentation at the state meeting level and made available to all members.

It was moved by Doctor Jarrett, seconded by Doctor Steen and unanimously carried that we inform Doctor Tompkins that it has been considered by the Board of Directors; and that it hasn't been the policy of the State Association to sponsor this type of seminar.

COMMITTEE ON REHABILITATION

In line with the AMA House of Delegates resolution adopted in December last, its Committee on Rehabilitation urges the medical profession to accept its responsibilities in the field of rehabilitation by initiating leadership at the state and community levels. The Professional Committee recommends the establishment of a Committee on Rehabilitation, at an early date, an investigation of existing facilities in Arizona for the care of the handicapped being already underway by it.

It was moved, seconded and unanimously carried that we inform the Professional Committee of the fact that the By-Laws allows it to proceed in their request.

MATERNAL AND CHILD HEALTH COUNCIL

Frank R. Williams, Director, Local Health Administration, Arizona State Department of Health, and as temporary chairman of the Maternal and Child Health Council of the Arizona League for Nursing, by letter dated June 4, 1959, extended an invitation to this Association to participate in the formation of a local MCH Council similar to that of the National League of Nursing.

It was moved, seconded and unanimously carried that the Professional Liaison Committee be instructed to investigate this proposal or request of Mr. Williams and report back to this Board its findings and recommendations.

Graham County Medical Society

Donald E. Nelson, M. D., of Safford, in behalf of the Graham County Medical Society, by letter dated June 16, 1959, refers to the Board for consideration what it feels is a very serious matter, i.e., the alleged invasion into the private practice of medicine by the Arizona State Department of Health associate with expansion of its "multiphasic screening program".

It was moved, seconded and unanimously carried that we refer this to the proper sub-committee (Public Health Liaison) of the Professional Liaison Committee for their complete study and recommendation; and inform Graham County that we are making such referral and will study this with great care and are in great sympathy with their position.

COMMUNICATIONS

STATE BAR OF ARIZONA – ACKNOWLEDGMENT – HOUSE ACTION 5/2/59

The Board was informed of the acknowledgment by the State Bar of Arizona of its appreciation for the early adoption of the joint "Declaration of Principles" between The Arizona Medical Association, Inc., and the State Bar of Arizona.

TEXAS MEDICAL ASSOCIATION – AMA CLINICAL MEETING

In connection with the AMA Clinical Session to be held in Dallas, December 1 through 4, 1959, the Texas Medical Association, in keeping with growing popularity, proposed the creation of a "Southwestern (Hospitality) Room" to be sponsored by the States of Arizona, Arkansas, Louisiana, New Mexico, Oklahoma and Texas. It is suggested that luncheon and cocktails be served December 1, 2 and 3, 1959, between 11:30 A.M. and 2:00 P.M., possibly in the Sky Room of the headquarters Adolphus Hotel. Attendance is estimated at approximately 750 each day at a total cost not to exceed $8,000.00. Financing would be on the basis of percent of the total number of delegates in each state to the total cost. Arizona's share would approximate $500.00. Each state would also be privileged and requested to provide at its expense some gift, symbolic of the state. This could be a particular food, or otherwise.

It was moved, seconded and carried, that we accept this kind offer.

AMA COUNCIL ON MEDICAL SERVICE – RAILROAD RETIREMENT BOARD – DISABILITY EXAMINATIONS

The Committee on Federal Medical Services of the Council on Medical Service of the AMA submitted information concerning the disability evaluation program of the Railroad Retirement Board. The Board is set up to administer the provisions of the Railroad Retirement Act and the Railroad Unemployment Insurance Act. It administers disability compensation programs established thereunder and it is indicated the Board would like to make more use of the private practitioners in its program, seeking the cooperation of medicine.

AMA COUNCIL ON NATIONAL DEFENSE– PHYSICIAN TRAVEL TO HOSPITAL IN EMERGENCIES

The AMA Council on National Defense, by memorandum dated June 2, 1959, requests state medical associations to consider the matter of appropriate identification for physicians during emergency situations, to expedite their travel to hospitals and other places where needed, in cooperation with local law enforcement personnel.

It was moved, seconded and unanimously carried that this matter be referred to the subcommittee on Civil Defense of the Professional Committee.

WOMAN'S AUXILIARY STUDENT NURSE LOAN FUND COMMITTEE

Mrs. Hiram Cochran, President, Woman's Auxiliary to the Arizona Medical Association, by letter dated June 5, 1959, advised of a recommendation made to its Student Nurse Loan Fund Committee that it consider the possible expansion of the scholarship loan program to include students in the paramedical fields.

It was moved, seconded and unanimously carried that we encourage them to make the investigation and communicate to us (Board) the results of their investigation and recommendations prior to acting on it.

OTHER BUSINESS

NATIONAL CASUALTY COMPANY – DETROIT – SUPPLEMENTAL COVERAGE

The National Casualty Company of Detroit, current underwriters of the Association-sponsored group accident and sickness disability insurance program, proposes, with the approval of the Board, to offer qualified members supplemental coverage of an additional $200.00 per month.

"This policy would be available to active members under the age of 64 with a renewal privilege to age 70. Individuals' policies would be issued when at least 10 applications have been received and thereafter there would be no change in the coverage or the rate structure for an individual insured member. However, the Company would reserve the right to make necessary adjustments on all policies bearing this same form number but through this means of combining the risk and the premiums we have security for the individual insured which can hardly be obtained on an individual basis. From an administration standpoint the original policies would be prorated to the regular semi-annual collection dates so that we would not increase the number of premium payments per year. Similarly, when a claim occurs only one notice of claim is required and the disabled member receives two (2) checks instead of one."

It was moved, seconded and unanimously carried that we approve.

CENTRAL OFFICE ADVISORY COMMITTEE – OFFICERS EXPENSE REIMBURSEMENT

Doctor Yount, Chairman of the Central Office Advisory Committee to which Council (now Board of Directors) had referred the question of reimbursement of Officers of the Association for monies expended in pursuit of Association business, reported that the recommendation of the Committee is: "that we feel there should be no question at all about reimbursing the Officers for travel when travel is directed by the Board of Directors, such as the Winslow problem." Then, the matter of "emergencies" came up and under emergencies, we would think that the visit to Yuma last year was an emergency which arose between Council meetings.

It was moved by Doctor Melick, seconded by Doctor Jarrett and unanimously carried that the Central Office Advisory Committee be designated as being responsible for approval of travel (claims) in emergency situations.

Meeting Adjourned at 6:00 P.M.

Lorel A. Stapley, M.D., Secretary

BLUE CROSS — BLUE SHIELD

ARTHUR C. Stevenson, M.D. and Ben P. Frissell, M. D., both these gentlemen are of particular interest to all of us. Dr. Stevenson is the new President of Blue Shield; Dr. Frissell is his Blue Cross counterpart.

We think it only appropriate that we offer you a capsule of information regarding both.

We will start with Dr. Stevenson. He was born in Gothenburg, Nebraska in 1916. He attended Hastings College, garnering a BA degree, a listing in college "Who Is Who," Little All America football honors and honorable mention All America in basketball. Later played professional football for the Winnipeg Bombers, gaining all league honors for 5 consecutive years, and leading his team to the Canadian championship twice from his quarterback slot. Dr. Stevenson received his medical degree from Manitoba Medical College in 1942. After a service stint, he came to Phoenix and served his residency at Good Samaritan Hospital. He resides with his wife, Dorothy, and their three children, Sally and the twins Curtis and Gary, at 3722 East Pasadena Avenue. He gets in an occasional round of golf, shooting in the low 70's.

Dr. Frissell was born in Oak Ridge, Missouri in 1907. He attended college at Southeastern Missouri College, obtaining his undergraduate degree in 1929. For his medical schooling he went to Washington University of St. Louis, graduating in 1934. He followed this up with an internship at Barnes Hospital in St. Louis. In 1936 he came to Tucson and spent two years at the Desert Sanitorium, better known to us today as Tucson Medical Center, one of our Blue Cross member hospitals. In 1938 he affiliated with Dr. Louis Baldwin of Phoenix. He lives

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with his wife and two children at 1633 West Virginia Ave. Nelson, his son, is a junior at Colorado State University, while his daughter, Charlotte, who is working at Blue Cross this summer, will be a sophomore at the same school come this autumn. Dr. Frissell has been exceedingly active in civic and medical affairs, having served on the County Board of Health and the Board of Directors of the Maricopa County Medical Society, among other things.

ARIZONA POISONING CONTROL INFORMATION CENTER

ADRENOCORTICOIDS IN THE TREATMENT OF LYE POISONING

To date this year, 19 cases of lye poisoning in Arizona have been reported to the Arizona Poisoning Control Information Center. Lye is commonly found in the household because of its usefulness as a drianpipe cleaner and as an oven cleaner. It is highly corrosive to living tissue and causes an intense burning pain in the mouth and throat upon ingestion. When the caustic reaches the esophagus, it induces a reflex spasm that delays its passage and the greatest tissue damage is thus produced in this area. On the basis of past experience, various clinicians estimated that before the advent of steroid therapy, approximately 50 per cent of patients who ingested lye developed esophageal stricture. Systemic reactions to the corrosive is due solely to local tissue injury. Death may occur from any of several complications: Circulatory shock, asphyxia due to glottic or laryngeal edema, perforation of the esophagus or stomach, intercurrent infections, or inanition due to the late formation of esophageal strictures. In a previous bulletin from the Arizona Poisoning Control Information Center(1), a number of measures were suggested for the treatment of lye poisoning. Among the measures recommended is the use of cortisone to minimize the formation of stricture of the esophagus. In view of recent clinical reports which emphasize the apparent efficacy of adrenocortical steroids in the prevention of esophageal stricture formation which results from lye poisoning, it is of interest to discuss further the use of steroids in the treatment of corrosion of the esophagus induced by the ingestion of lye.

Ray and Morgan(2) reported 11 cases of lye ingestion by children who were subsequently treated with cortisone, 25 mg. every 6 to 8 hours for seven to 30 days. The steroid was administered by the intramuscular route during dysphagia, and then subsequently by the oral route. In addition, antibiotics were given in all cases. Seven of the patients were considered to have severe burns of the esophagus and four were considered to have mild burns of the esophagus. Ten of the 11 patients were treated with cortisone and antibiotics within 24 hours after the ingestion of the corrosive agent. None of these patients showed clinical evidence of esophageal stricture during follow-up studies of six to 28 months' duration. However, one of the 11 patients did not enter the hospital for treatment until four days after the ingestion of the caustic. Although the administration of cortisone relieved dysphagia, a stricture of the esophagus developed three months later, which required bougienage. The results of this 1 case appears to corroborate the contention of Spain and associates(3) that the delayed use of steroid therapy is ineffective in preventing the formation of fibrous tissue.

Miller and Warren(4) recently suggested a regimen which they employed effectively for the prevention of esophageal stenosis, following the ingestion of lye. Upon admission, before treatment was initiated, a chest x-ray and tuberculin test were performed. Then prednisone (Meticorten) was administered orally, approximately 1 mg. per pound of body weight per 24 hours, in three or four divided doses. Tetracycline was also given orally in a dose of 15 to 20 mg. per pound per day. Esophagoscopy was performed seven to 10 days after admission and if no corrosion was observed, steroid therapy was gradually withdrawn over a period of several days and tetracyline was discontinued after termination of steroid treatment. On the other hand, if corrosion was observed in the esophagus, steroid treatment was continued for an additional week; then a "barium swallow" was performed. If no stricture was observed, prednisone treatment was slowly withdrawn over a period of two to three weeks. These authors reported that of 13 children treated with prednisone for lye poisoning, none developed esophageal stricture during follow-up studies of one month to 3½ years' duration.

Although the use of adrenocorticoids for the prevention of esophageal stenosis following the ingestion of lye may be effective, certain precautions regarding the use of these agents require mention. For example, Rosenburg and associates(5) reported that rabbits treated with large doses of cortisone, after experimental lye corrosion of the esophagus, showed a marked reduction in incidence and severity of stricture formation; however, there was a high incidence of complications, chiefly intrathoracic infections. In a subsequent experiment(6), these investigators administered penicillin as well as cortisone to lye-treated rabbits and observed a marked reduction in the infections. Hence, it is suggested that antibiotics should be administered concurrently with adrenocorticoids in the treatment of lye corrosion of the esophagus. Another precaution that should be observed during adrenocorticoid therapy for lye ingestion is that bougienage should not be performed during the period of steroid treatment. Des Portes and Ray(7) reported perforation of the esophagus during bougienage in a patient who was under prednisone therapy (approximately two weeks) for lye corrosion of the esophagus. These authors cautioned that in cases where bougienage of the esophagus is necessary, it should be deferred at least two to four weeks after termination of steroid therapy.

OXYGEN IN CYANIDE POISONING

The use of nitrite and thiosoulfate is generally considered as the treatment of choice for cyanide poisoning. Since cyanide produces its cytotoxic effect by reversible inhibition of essential cellular enzyme systems which contain trivalent iron (mainly cytochrome oxidase), the main objective of therapy is to restore enzyme activity. This objective is achieved by inducing, with sodium nitrite, methemoglobinemia. Methemoglobin combines with cyanide to form cyanmethemoglobin and thus competes with essential enzyme systems for the cyanide ion. Following the administration of sodium nitrite, sodium thiosulfate is administered to convert to thiocyanate the cyanide which is released by the dissociation of cyanmethemoglobin. Recently, Levine (8) reported that larger doses of potassium cyanide are required to produce brain lesion in rats if oxygen was administered than if the experiment was conducted in air. He also observed that the LD_{50} of potassium cyanide was increased 10 to 20 per cent by the administration of oxygen, and that the survival time after fatal doses was increased. On the basis of these observations and reports by other investigators, Levine pointed out that even if the metabolic effect of oxygen is small, it may prolong life enough to give detoxification mechanisms a chance to operate. Further, he emphasized that oxygen should be administered even after the injection of nitrite and thiosulfate, since methemoglobinemia induced by nitrite reduces the oxygen-carrying capacity of blood.

STATISTICS OF 90 POISONING CASES IN ARIZONA DURING AUGUST 1959

AGE:	*Per Cent*	*Number*
Under five years	80.0	(72)
Six to 15 years	3.3	(3)
16 to 30 years	6.7	(6)
31 to 45 years	4.5	(4)
Over 45 years	3.3	(3)
Not reported	2.2	(2)
NATURE OF INCIDENT:		
Accidental	88.8	(80)
Intentional	11.2	(10)
Between 6 a.m. and noon	41.1	(37)
Between noon and 6 p.m.	32.5	(29)
Between 6 p.m. and midnight	17.8	(16)
Between midnight and 6 a.m.	1.1	(1)
Not reported	7.8	(7)
OUTCOME:		
Recovery	98.9	(89)
Fatal (aspirin poisoning)	1.1	(1)

CAUSATIVE AGENTS:		
Internal Medicine	*Number*	*Per cent*
Aspirin	23	25.4
Other analgesics	1	1.1
Barbiturates	11	12.2
Antihistamines	1	1.1
Laxatives	2	2.2
Cough medicine	0	0.0
Tranquilizers	4	4.5
Others	4	4.5
Subtotal	46	51.0
External Medicines		
Liniment	0	0.0
Antiseptics	5	5.6
Others	0	0.0
Subtotal	5	5.6
Household Preparations		
Soaps, Detergents, etc	0	0.0
Disinfectants	1	1.1

Bleach	2	2.2
Lye, corrosives, drain cleaners	6	6.7
Furniture and floor polish	0	0.0
Subtotal	9	10.0
Petroleum Distillates		
Kerosene	2	2.2
Gasoline	3	3.4
Others	2	2.2
Subtotal	7	7.8
Cosmetics	0	0.0
Pesticides		
Insecticides	5	5.6
Rodenticides	0	0.0
Others	2	2.2
Subtotal	7	7.8
Paints, Varnishes, Solvents, etc.	4	4.5
Plants	9	10.0
Miscellaneous	2	2.2
Unspecified	1	1.2
TOTAL	90	100.0

WILLIS R. BREWER, Ph.D.,
Dean, College of Pharmacy,
The University of Arizona

ALBERT L. PICCHIONI, Ph.D.,
Pharmacologist and Director,
Arizona Poisoning Control Program

LINCOLN CHIN, Ph.D.,
Pharmacologist

1. Progress Report of the Poisoning Control Information Center at the University of Arizona College of Pharmacy, Arizona Medicine, 15:62, 1958.
2. Ray, E. S., and Morgan, D. L., "Cortisone Therapy of Lye Burns of Esophagus," J. Pediat., 49:394, 1956.
3. Spain, D., Molomut, N., and Haber, A., "Biological Studies on Cortisone in Mice," Science, 112:335, 1950.
4. Miller, C. L., and Warren, R. O. Y., "Steroid Treatment of Lye Burns of the Esophagus," JAMA, 170:1525, 1959.
5. Rosenberg, N., Kunderman, P. J., Vroman, L., and Moolten, S., "Prevention of Experimental Esophageal Stricture hy Cortisone," Arch. Surg., 63:147, 1951.
6. Rosenberg, N., Kunderman, P. J., Vroman, L., and Moolten, S. E., "Prevention of Experimental Esophageal Stricture by Cortisone. II. Control of Suppurative Complications by Penicillin," Arch. Surg., 66:593, 1953.
7. Des Portes, W., and Ray, E. S., "Lye Burns of the Esophagus Treated with Steroid Therapy," AMA Arch. Otolaryn., 70:130, 1959.
8. Levine, S., "Oxygen in the Therapy of Cyanide Poisoning," JAMA, 170:1585, 1959.

SCHOOL CHILDREN REQUIRING EYE CARE

THE National Medical Foundation for Eye Care has recently published a pamphlet entitled "Identification of School Children Requiring Eye Care." In this pamphlet are discussed the objectives of routine visual testing in the pre-school and school-age child. The methods for the examination are also discussed. It was the opinion of the board of ophthalmologists who compiled this report that the school health program should include routine visual testing on all students. This program merely augments the general medical care of the child. The primary objective of the eye health program in school should be to identify and refer for medical examination those children who probably have an abnormal condition in their visual systems. There are many ways of identifying these abnormalities, some of which are: 1. Evidence of some abnormal visual difficulty as observed by the parents or the teachers. 2. Signs detected during the physical examination by the school physician or family physician. 3. Functional tests applied by the school physician or the school nurse.

The functional tests which are of primary importance in the examination of the school child are primarily the central visual acuity of the child. This should be done on a regulation 20-foot lane, using either the Snellen chart or the visual E chart. As a help in determining the presence of hyperopia, the convex lens test can be used, but is not essential. Screening for binocular fusion and near vision are probably not necessary since these usually require further training and testing techniques. It should be stressed that every child should have a thorough examination by a qualified ophthalmologist prior to entrance into school. This examination is most advantageously done between the ages of four and five years. Any abnormality of binocular fusion or congenital defects would be detected at this time. The school health program would then be an adjunct to further early recognition of visual acuity problems.

The school health programs of Arizona include routine testing for visual acuity and by this means many abnormalities of the visual systems have been suspected and referred to a qualified ophthalmologist for further treatment. Should many of these difficulties not be detected early in the life of the school child, serious impairment to the acuity of one or both eyes could result. The visual screening program in our school systems should certainly receive the support of the medical profession.

A. K. HANSEN, M.D.

LOCATION INQUIRIES

CAGLE, JR., JACKSON E., M.D., 626 Hunter Road, Glenview, Ill.; *S;* 1956 graduate of the University of Illinois; interned and served residency at University of Illinois Research and Education Hospital in Chicago; fulfilled military obligations; holds license in State of Illinois; married; age 30; interested in associate practice; available July 1961.

COUSSIRAT, ADOLFO CASIMIRO, M.D., 10 Butterworth Road, Beverly, Mass.; *ANES;* 1949 graduate of Universidad del Litoral, Rosario, Argentina; citizenship status — first papers in 1957; interned at St. Mary's Hospital in San Francisco, served residency at Massachusetts General Hospital in Boston; holds temporary license in State of Massachusetts; married; age 38; interested in full time hospital or associate practice; available June 1960.

CURTIS, ROGER W., M.D., 1011 Steele, Denver, Colo.;*GP;* 1958 graduate of Colorado Medical School; interned at U. S. Public Health Hospital in Seattle, Wash.; fulfilled military obligations; holds license in State of Colorado; married; age 30; fulfilled military obligations; interested in clinic, assistant or associate practice; available approximately September 1959.

DeONIER, CARL WILLIAM HENRY, M.D., P. O. Box 83, High Island, Texas; *GP;* 1939 graduate of the Medical Branch University of Texas; interned at St. Joseph's Hospital in Denver, Colo.; served residency at Hahnemann Hospital and Medical School; fulfilled military obligations; holds license in State of Texas; married; age 46; interested in industrial or institutional practice; available immediately.

SANDERS, JR., LESTER W., M.D., U. S. Army Hospital, RYIS, APO, 331, San Francisco, Calif.; *PD;* 1954 graduate of the College of Medicine, University of Cincinnati; interned at Fitzsimmons Army Hospital in Denver, Colo.; served residency at Letterman Army Hospital in San Francisco; holds license in states of Ohio and California; fulfilled military obligations; married; age 31; interested in assistant or associate practice; available sometime between February and July of 1960.

LOCATION OPPORTUNITIES

ASHFORK — Population 700. North centrally located — railroad center. Contact the Women's Club, Ashfork, Ariz.

CAMP VERDE — Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Ariz.

EL MIRAGE — Population 2,000 — and including the trading areas of Surprise. Youngtown, Peoria and Luke Air Force Base the population is estimated at 7,000 to 8,000 persons. Opportunity for a GP due to retirement of doctor currently serving with the possibility of school service. Climate is excellent, warm and dry. Office facilities are available and in the area surrounding El Mirage from Glendale (9 miles) to the east, and Wickenburg (35 miles) to the west there are only two doctors to serve this community. The need for an M.D. and/or surgeon is very real and one should do very well. For information write Mr. H. Faulkner, Town Clerk, Town of El Mirage, El Mirage, Ariz.

GILA BEND — Population 2,500 — 80 miles west of Phoenix. Nearest town to the Painted Rock Dam Project. Good opportunity for GP. Cattle, cotton and general farming. Office and equipment available. $150 monthly income from board of supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

GLOBE — Population 10,000 and including the mining and cattle areas of Miami, Superior, Ray, Hayden, Winkleman, Payson and San Carlos; population estimated at 30,000 persons. Located about one hour by car from either Tucson or Phoenix. No. ENT man in the area, etc. Ideal climate, with the best area for outdoor activities. Contact Eugene R. Rabogliatti, D.D.S., 149 S. Broad St., Globe, Ariz., or Ellis L. Pollock, M.D., Miami Inspiration Hospital, Miami, Ariz.

HAYDEN — Population 3,000/4,000 — Industrial practice. Approximately 200 employes and dependents. Only part-time required. Coverage; Metropolitan Surgical Plan. Physician may engage in private practice also. Small company-owned clinical building (new) available for use, with x-ray equipment, diathermy, equipment, etc. Full-time nurse available to assist; clerical work to be handled by company. Company housing facilities available for physician — small rental. Contact Mr. Ben Roberts, American Smelting & Refining Company, P. O. Box 1111, El Paso, Texas.

HOLBROOK — Population approximately 5,500 — elevation 5,080. Excellent opportunity for GP. Arrangements can be made to take over existing vacancy in practice. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

MIAMI — Opportunity for GP — Industrial hospital staffed by approximately seven doctors, who care for personnel and families of those who work for the three principal mining companies. Community served by many mining and ranching interests. Contact Robert V. Horan, M.D., Miami Inspiration Hospital, Miami, Ariz.

MORENCI — Mining community near New Mexico-Arizona border. Population 10,000. Has vacancy at hospital for GP. Contact Carl H. Gans, M.D., Morenci Hospital, Morenci, Ariz.

PAGE — Population growing by leaps and bounds at the site of the new Glen Canyon Dam Project. Current estimates are 6,000 to 8,000 total. Only one M.D. is now located in Page and he has facility available. Located about 90 miles north of Flagstaff, Ariz., the building project is estimated to be concluded in 10 years. Write Ivan W. Kazan, M.D., 6th Ave., & South Navajo, Page, Ariz., for full details.

PAYSON — Staff doctor for small country clinic hospital. Located in the heart of one of the fastest growing residential, recreational areas in the state. One hundred miles northeast of Phoenix on fine, paved, scenic highway, this clinic, operational two years, has been forced to expand into a 12 bed hospital, with facilities for further expansion at an early date. Wonderful opportunity for large and rapidly growing private practice. Elevation of 5,000 feet. Fine year round climate, excellent for asthmatics. Surrounding country is forested and abounds in fish and game, with excellent facilities for camping, riding and hiking. For further information, contact Mrs. Edward Taylor, Section Payson Clinic Inc., Payson, Ariz.

PHOENIX — Excellent opportunity for opthalmologist or EENT man as associate. For further information contact, E. G. Barnet, M.D., 1120 Professional Building, Phoenix, Ariz.

PHOENIX — Maricopa County has several excellent associations (salary or partnership) available in metropolitan Phoenix and surrounding towns in General Practice, Opthalmology, ENT, Pediatrics and Anesthesiology. Neighborhood locations are also available for GPs. Please contact Maricopa County Medical Society, 2025 North Central Ave., Phoenix, AL 8-6901, advising medical training, military and family status, age, health, etc., and enclose small photograph.

PHOENIX — State department of health — child development center. Opportunity for doctor of medicine (Pd) with three year's experience. Male or female. Monthly salary $690 — full time. Operation includes (a) a doctor of medicine (Pd); (b) two or three psyhcologists on a consultant basis; (c) a psychiatric social worker; (d) a teacher specializing in child development; problems of pre-school children. Available July 1, 1959. Contact Mr. Thomas Golden, Arizona Merit System, 11 North 17th Ave., Phoenix, Ariz. (AL 3-3189)

ST. JOHNS — Seriously need a doctor of medicine, preferably a GP, in this east-central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

TOLLESON — In need of GP. Serves a trading population of from 12,000 to 15,000. Ten miles west of Phoenix, with elementary and high schools, churches of all denominations. Complete office and equipment for GP is available on reasonable term lease or purchase. Contact Mr. F. E. Babcock, President, Chamber of Commerce, 9112 West Van Buren Street, Tolleson, Ariz.

TUCSON — The VA Hospital is in urgent need of an orthopedic surgeon. They prefer someone who is board certified, but would take someone who has had special training as they have the local men in this field available for consultation service. State license is necessary (but not necessarily an Arizona license). Contact S. Netzer, M.D., Director, Professional Service, VA Hospital, Tucson, Ariz.

VA HOSPITAL – FORT BAYARD, N. M. – In the process of recruiting for physicians to join the staff of this 222-bed general medical and surgical hospital. Specifically interested in physicians specializing in internal medicine or surgery. Contact Glenn O. Smith, Chief, Personnel Division, VA Hospital, Fort Bryard, N. M.

FOR INFORMATION ON OPPORTUNITIES IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Ariz.

Carl H. Gans, M.D., Phelps Dodge Hospital, Morenci, Ariz.

Ira E. Harris, M.D., Miami Inspiration Hospital, Miami, Ariz.

Charles B. Huestis, M.D., Box 928, Hayden, Ariz.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Ariz.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Ariz.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Ariz.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Ariz.

HEALTH INFORMATION FOUNDATION

SUBSCRIBERS to two prepayment plans offering coverage for a broad range of physicians' services have an average of one-third of their total health expenses(including insured and uninsured items) met by their health insurance, the Health Information Foundation reports.

In its monthly statistical bulletin, *Progress in Health Services,* the foundation published preliminary findings of a survey of two New York City plans, Group Health Insurance, Inc. (GHI), and the Health Insurance Plan of Greater New York (HIP). The study was made in co-operation with the National Opinion Research Center of the University of Chicago. Both plans cover physicians' services not only in the hospital, but also in home and office; subscribers receive hospitalization benefits through their Blue Cross coverage.

The plans differ, however, in their arrangements with physicians. GHI, the Foundation pointed out, makes payments to doctors practicing out of their private offices, paying a fee for each service on the basis of a fee schedule. HIP, on the other hand, provides physicians' services in 31 group medical centers, paying these groups on a capitation basis.

Subscribers interviewed in the survey were drawn from three New York unions, members of which were free to join either plan under collective bargaining agreements. The two samples were comparable in terms of age, size of family, sex, and other factors.

Both HIP and GHI covered about a third of subscribers' total expenses for doctors, hospitals, dentists, drugs, and other medical items. This proportion, the Foundation noted, was higher than the proportion of total costs met under the more usual health insurance plan, which covers only in-hospital services.

Members of the two plans reported quite similar experiences regarding utilization and costs of services outside the hospital. But they "differed markedly," the Foundation said, in average utilization and costs of hospital care and surgery, and in their attitudes toward their plan.

HIP met 80 per cent of enrollees' costs for all physicians' services, against 59 per cent for GHI. GHI subscribers used more hospital care and surgery than did HIP members – 11.0 hospital admissions per 100 persons against 6.3, and 7.6 hospital surgical procedures per 100 persons, against 4.3.

Where members' attitudes were concerned, the Foundation said, "GHI enrollees were more satisfied with both the plan and its physicians." Ninety per cent of the GHI members were "entirely" or "fairly well" satisfied with their plan, against 79 per cent of the HIP members.

"When families enrolled in these programs had low gross costs – under $300 during a year – they had about one-fourth of their total medical costs met by insurance. Those with costs of $300 or more, on the other hand, had an average of more than 40 per cent of all medical and dental costs covered."

Future Meetings

THE SOUTHWESTERN SURGICAL CONGRESS

SCIENTIFIC ESSAY CONTEST

AGAIN this year, the Southwestern Surgical Congress is offering awards for its annual scientific essay contest by residents and younger surgeons.

The total amount of the awards is to be $600, to be distributed in the following manner: $300 for first, $200 for second, and $100 for third prize in the award competition.

We strongly urge residents, interns, and eligible associates to give serious consideration to entering this essay contest, and feel that it will become and remain a highlight in the annual meetings of the organization.

The deadline for submitting abstracts is Dec. 15, 1959:

ANNOUNCING SOUTHWESTERN SURGICAL CONGRESS ANNUAL AWARD COMPETITION

Eligibility

The award competition is open to M.D.s in active training in general surgery, or the surgical specialties, or who have been in private practice no more than three years beyond completion of resident, interne and post-graduate training. Eligibility is further restricted to those individuals who are within the geographic confines of the Southwestern Surgical Congress.

Subject Material

Subject material acceptable shall be either pure investigative or scientific research, or clinical research and investigation, which shall consist wholly or largely of the essayist's contributions, the work to be started while the doctor is in training and must be completed and reported within three years of completion of his training. The work shall not be merely medical and social service reporting for the convenience of a chief of staff, but is intended to encourage original study and investigation on the part of the essayist himself. The essayist should assume the major role in preparation of the material so that in the event of publication, he himself shall be considered the senior author of such essay. The quality of the paper to receive an award consideration must be of sufficient merit to satisfy the essay award committee's evaluation, and only such papers as merit the committee's acceptance will be judged in the competition.

Presentation

The essayist(s) whose paper is selected to be read at the annual meeting during the scientific program, will be the invited guest of the Southwestern Surgical Congress during the annual meeting; this to include the essayist's wife if he is married, and includes lodging, meals and the social functions of the organization, but does not provide transportation to and from the meeting, which is the essayist's own responsibility.

The awards are to be made at the next annual meeting of the Southwestern Surgical Congress in Las Vegas, Nev., March 28, 29, 30, 31, 1960.

Abstracts Due for Consideration by
Dec. 15, 1959

Interested persons please contact John A. Growdon, M.D., 1324 Professional Building, Kansas City, Mo.

AMERICAN COLLEGE OF CHEST PHYSICIANS

POSTGRADUATE COURSES ON DISEASES OF THE CHEST

WE WISH to announce that the Council on Postgraduate Medical Education of the American College of Chest Physicians presented the following postgraduate courses this fall: 14th annual course, Clinical cardiopulmonary physiology, Edgewater Beach Hotel, Chicago, Oct. 5-9; 12th annual course on Diseases of the Chest, Park Sheraton Hotel, New York City, Nov. 9-13; fifth annual course on Diseases of the Chest, Ambassador Hotel, Los Angeles, Dec. 7-11.

The course on Clinical cardiopulmonary physiology was the second to be presented by the council on this timely subject. The New York City and Los Angeles courses will offer the most recent advances in the diagnosis and treatment of chest diseases — medical and surgical.

Tuition for each course is $100, including round table luncheon discussions.

Further information may be obtained by writing to the Executive Director, American College of Chest Physicians, 112 East Chestnut Street, Chicago 11, Ill.

MINNESOTA STATE MEDICAL ASSOCIATION

107th ANNUAL MEETING

THE Minnesota State Medical Association announces that its 107th annual meeting will be held at the Mayo Civic Auditorium and the Kahler Hotel, Rochester, Minn., on the dates of May 23, 24, and 25, 1960.

FOURTH ANNUAL CLINICAL CONFERENCE

SEVEN guest speakers participated in the fourth annual clinical conference, "Tumors of the Head and Neck," held Nov. 13 and 14, 1959. Sponsors of the conference was The University of Texas M. D. Anderson Hospital and Tumor Institute, and The University of Texas Postgraduate School of Medicine. The clinical conference is conducted for the benefit of practicing physicians.

Guest speakers were: Robert L. Brown, assistant professor of surgery, Emory University, Atlanta, Ga.; Calvin T. Klopp, assistant clinical professor of surgery, George Washington University School of Medicine, Washington D. C.; Lewis W. Guiss, associate clinical professor of surgery, University of Southern California School of Medicine, Los Angeles, Calif.; Robert C. Hickey, associate professor of surgery, State University of Iowa College of Medicine, Iowa City, Iowa; John V. Blady, clinical professor of surgery, Temple University School of Medicine, Philadelphia, Pa.; Glenn H. Leak, cancer co-ordinator, University of Buffalo School of Medicine, Buffalo, N. Y., and Murray M. Copeland, professor of oncology, Georgetown University School of Medicine, Washington, D. C.

Dr. William S. MacComb, head and neck surgeon at M. D. Anderson Hospital, and program chairman for the conference, announced that 19 staff members of the hospital participated in the conference. Marga H. Sinclair, associate head and neck surgeon and Gilbert H. Fletcher, radiotherapist, assisted with the program arrangements.

Topics discussed included: Cancer of the intra-oral cavity, concepts in head and neck cancer, Diagnosis of head and neck cancer, Problems of reconstructive surgery in cancer of the head and neck regions, Cancer of the pharynx and nasopharynx, Report on perfusion of head and neck tumors, Cancer of the paranasal sinuses, Salivary gland tumors, Cancer of the larynx, the evaluation of supervoltage Roentgen therapy for patients with head and neck cancer, Indications for radical neck dissection, Extension of carcinoma through peripheral nerves in the head and neck regions, Squamous papilloma of nasal mucosa, and Wound sterilization by locally applied chemotherapeutic agents. Murray M. Copeland gave a conference summary.

Registration was Friday, Nov. 13, from 8 to 9 a.m. in the auditorium at M. D. Anderson Hospital. Members of the Academy of General Practice may obtain 10 hours credit for attendance at the conference. Those who wish this certification must have registered in advance with the University of Texas Postgraduate School of Medicine, Jesse Jones Library Building, Houston, Texas. A fee of $5 must accompany registration for credit, with checks made payable to The University of Texas. Those who attended non-credit were registered free of charge. Address requests for information to: Editorial Office, M. D. Anderson Hospital, Houston 25, Texas.

INFANT FEEDING

INFANT feeding, with special emphasis on protein, iron, calcium and phosphorus, was the topic of an October symposium sponsored by the American Medical Association's Council on Foods and Nutrition.

The symposium on Tuesday, Oct. 27, was held at the New York Hospital — Cornell Medical Center in New York City.

Co-sponsors were New York Hospital — Cornell Medical Center, Cornell University Graduate School of Nutrition, New York Academy of Medicine, and the Medical Society of the County of New York.

The morning session, opening at 9:30 a.m., dealt with the protein nutrition of infants. This subject was chosen, according to Philip L. White, Sc.D., secretary of the AMA council, because there is still some question about the amino acid requirements during the first two years of life. The problem was examined, with a review of current knowledge and an exploration of those areas still undefined.

The amino acid requirements of infants was outlined by Dr. L. Emmitt Holt Jr., professor of pediatrics at New York University, while differences in amino acid content of human and cow's milk was discussed by Dr. Harold H. Williams, professor of biochemistry and nutrition at Cornell University.

The protein allowances of premature and full-term infants was discussed respectively by Dr. Harry H. Gordon, pediatrician in chief of Sinai Hospital, Baltimore, and Dr. Calvin W. Woodruff, associate professor of pediatrics at the Vanderbilt University School of Medicine. Nashville, Tenn.

Their presentations were followed by a panel discussion by Dr. Moises Behar, chief of the division of clinical nutrition at the Institute of Nutrition of Central America and Panama, Guatemala City; Dr. Paul Gyorgy, professor of pediatrics at the University of Pensylvania School of Medicine, Philadelphia, and Dr. William M. Wallace, professor of pediatrics at Western Reserve University School of Medicine, Clevcland.

The morning session was moderated by Dr. Samuel Z. Levine, professor of pediatrics at Cornell University Medical College and pediatrician in chief at the New York Hospital.

The second portion of the symposium was presented at 8 p.m., with Dr. Robert L. Jackson, professor of pediatrics, University of Missouri, Columbia, as moderator.

Because anemia is a common problem among children, the iron requirements of infants were outlined by Dr. Irving Schulman, associate professor of pediatrics at Northwestern University, Chicago. The clinical manifestations of genetic aberrations of calcium and phosphorus metabolism were discussed by Dr. Donald Fraser, associate professor in the department of pediatrics at the University of Toronto.

"Appetite Regulation in the Young" was the subject of Dr. John R. Brobeck, professor of physiology at the University of Pennsylvania.

Advance registration for the symposium was made by writing to the Council on Foods and Nutrition, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

POSTGRADUATE MEDICAL COURSES

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FOR THE MEDICAL PROFESSION

1959:

Symposia

Nov. 16-19 Internal medicine.

Nov. 23-24 Fractures.

Dec. 11-12 Glaucoma.

1960:

Jan. 18-21 The Heart: Rheumatic and Congenital Heart Disease.

Feb. 8-10 Radiology and Radioactive Isotopes.

Feb. 11 The Ophthalmoscope: Its use in medicine.

Feb. 22-26 Hematology.

Mar. 7-9 Pediatrics.

MEDICAL-SURGICAL SUBSPECIALTIES

Symposia

Mar. 21 Pulmonary Disease.

Mar. 22 Gastroenterology.

Mar. 23 Psychiatry.

Mar 24 Neurology and Neurosurgery.

Mar. 25 Endocrinology and Metabolism.

Apr. 4-6 Ophthalmology.

Apr. 6-8 Otolaryngology.

Apr. 11-13 Anesthesiology.

Apr. 22-22 Respiratory Physiology in Childhood.

May 23-26 Surgery.

AMERICAN CANCER SOCIETY, INC.

1959 CITATIONS

THE board of directors at its meeting on June 4, 1959, awarded citations to the following divisions and units:

Category A: Division or unit public education program; overall program or individual project.

The Marlboro County Unit of the South Carolina division for its successful year-round, comprehensive public education program.

The Cascade County Unit of the Montana division for its Central Catholic High School cancer club, an imaginative project which has been an inspiration to the community.

The Dallas County Unit of the Texas division for public education, a project reflecting ingenuity in planning and execution.

The Virginia division for its well-planned and successful public education workshop, heightening the effectiveness of the division's public education program.

B: Division or unit professional education program; overall program or individual project.

The Arizona division for its annual cancer seminar, the seventh and most impressive of its series of widely acclaimed conferences offered members of the medical profession.

The District of Columbia division for the Saint George Society, a project which should be an inspiration to medical students everywhere.

E: Division or unit training; volunteer or staff training program or individual project.

The Iowa division for significant progress in volunteer and staff orientation and training through a program unique in several aspects of conception and development.

G: Progress in cancer control of division or unit.

The Washington County Unit of the Pennsylvania division for an outstanding total program in all phases of cancer control.

H: Miscellaneous.

The California division for leadership in producing the first state legislation against cancer quackery and conducting a highly successful public education program in connection therewith.

The North Carolina division for the outstanding work done by its plans and projects committee, an excellent example of the manner in which a division may work successfully with legislative bodies.

The Pennsylvania division for the highly effective organization of its board of directors and the leadership and service of its members.

The Texas Division for the effective and far-reaching operations of its executive committee and various standing committees and subcommittees.

GRANT AWARDS

Award of 124 grants to scientists and research institutions, totaling $2,350,173 was approved by the American Cancer Society.

Announcement of the awards was made by Donald E. Johnson, Flint, Mich., chairman of the American Cancer Society Research Committee, at a meeting of the society's executive committee. Mr. Johnson is president and treasurer of the Advertisers Press, Inc. and of the Daily Reporter, Coldwater, Mich.

The grants announced were the third group of research awards made by the society for the fiscal year of 1958-59 and brought the total for this period to $8,684,585.

Under the new awards, the society will support 32 grants totaling $570,926 for research in the cause of cancer; 33 grants totaling $636,015 for research in the progress of cancer; 19 grants totaling $431,561 for research in the treatment of cancer; six grants amounting to $161,039 in lung cancer research; eight institutional grants totaling $195,000 to universities and scientific centers to stimulate the total level of cancer research, and 23 grants amounting to $321,632 for personnel for cancer research. The personnel for research grants provide for 22 postdoctoral fellowships and scholar grants and one lifetime professorship in cancer research.

In addition, the society allocated $24,000 for a special conference of scientists on the possible role of viruses in cancer, and $10,000 for a study leading to the production of a comprehensive index of literature related to cancer.

WOMEN'S AUXILIARY
RES IPSA LOQUITUR

"THE THING SPEAKS FOR ITSELF"

NIKITA KHRUSCHEV has stated, "We will bury you," meaning the United States.(1) Mao Tse-tung has surpassed the Russian dogma with his "hate America campaign."(2)

It is obvious that these fanatics would not hesitate to launch an attack on this country, utilizing any device that would insure their victory. The "imperialist United States," as we are referred to by the Red leaders, is the Number One target for annihilation.(2) Are we strong enough mentally, morally and physically to withstand such an assault? Could we survive the "brain washing" techniques which they have perfected? If they resort to warfare, would the civilian population be adequately trained and equipped? Would they possess the determination to survive?

Possible Situation

It is estimated there would be 40 to 50 million casualties as the result of one nuclear attack. By no stretch of the imagination would there be adequate doctors and nurses to cope with a situation of this magnitude.(3). The type of medical care these casualties would receive might be analgous to that given in the Crimean war, or worse.(4). We must augment these medical services by training non-medical personnel.

Women's medical auxiliary members, in their own communities, should be the first to assume these responsibilities. In any catastrophe, people are prone to rush to the nearest doctor's house. In the absence of the physician, the wife would be expected to assume the role of leadership and guidance. This is a challenge we should be prepared to accept.

Rx — Survival Aid

Survival aid is mandatory for everyone under the compelling requirements of all-out war and manpower mobilization. It cannot be taught from a podium. The object is to teach everyone to render "neighbor aid," "first aid," and "self aid." These are self explanatory.(5).

The five essentials of survival aid are:

1. *Wound Dressings:* Each individual should know how to apply a multipurpose dressing via a simple method, utilizing whatever material is available. The dressing should be applied to prevent infection, lessen pain (there may not be analgesics), restore function and maintain tissue alignment. Ideal dressings are the army Carlisle type. Lacking these, sheets, towels, clothing, paper or any type of material may be used. "If they are sterile, ideal; clean, wonderful; soiled, excellent; dirty, use them anyway."(5).

2. *Arrest bleeding:* (a) Pressure dressing. Most bleeding can be controlled by a properly applied pressure dressing if given half a chance. (5). Apply a thick, preferably soft, dressing over the injured area. Wrap snugly with a bandage. Elastic is ideal. If not available, tear strips of cloth from any other source and use them. After dressing is applied, elevate the injured part.

(b) Pressure points. Learn the major pressure points on the body. By applying manual pressure over these areas, bleeding can be controlled for a short period of time. This is particularly true of portions of the body where it is difficult to apply pressure dressings, such as the head and neck.(5).

(c) Tourniquet. "Use only as a last resort!"(5). If a large artery is severed, you may have to use a tourniquet. Be sure you know how to apply one properly. Much loss of tissue and damage to uninjured vessels can be caused by an incorrectly applied tourniquet. A triangular, muslin bandage is excellent, but other articles may be used as well, such as belts, socks, strips of clothing, rubber tubing, etc. "Once a tourniquet has been applied, *never* release it. This should be done by a doctor. It may be a big decision to make. In the event of mass casualties, there might be a time lag of 72 hours or longer before medical care would be available. You would have to weigh the consequences, and ask yourself this question. "Shall I save a life, or sacrifice a limb?" The victim might be yourself or a member of your own family.(5).

3. *Emergency splinting:* "The aphorism of splinting fractures where they lie must be impressed on everyone."(5). No person with a fracture, extensive laceration, or suspected fracture should be moved without prior immobilization of the injured part, unless there exists a greater, immediate threat to life from some other source. The possibility of a building collapsing, burning or an imminent explosion, would of course, necessitate the moving of the victim, regardless of the fracture.(5) "Realism demands

that these immobilization methods be taught by improvisation, using sticks, papers, magazines, clothing, or tying one body member to another" (5) We cannot assume that the common variety of splints will be available.

4. Handling patients: "This dictates a comprehension that caring for the injured requires more than just treating the injury. A word of reassurance, perhaps some fluids by mouth, warmth, proper position and careful movement may well represent the difference between preventing shock – living or dying."(5).

It makes little sense to treat a victim, then kill him by improper position or rough handling in order to get him to the nearest medical facility as quickly as possible.(5). This happens every day. The first impulse, it seems, is to get the casualty to the nearest hospital in the least possible time, usually neglecting to give the necessary life-saving procedures that are so desperately needed.

It seems logical to me, that were the principles of first aid adhered to, the casualty would be transported to a treatment facility at a safe speed. This would prevent compounding the injuries of the victim, and could prevent further accident as well. Ambulances run through intersections oblivious of red lights or stop signs, creating a hazard to motorists by their reckless, needless haste and nerve-wracking, screeching sirens.

5. Artifical respiration and maintenance of patent airways:(5). "Detailed comparative studies of mouth-to-mouth breathing and manual artificial respiration have been performed on temporary apneic, unconscious infants and adults. These studies have indicated the unequivocal superiority of mouth-to-mouth resuscitation over all manual methods in all age groups. Mouth-to-mouth breathing is the only technique which assures adequate ventilation in all cases."(6). This method of artificial respiration is easily performed, and is not tiring to the administrator. There are varying opinions as to whether this method or the push-pull method are the ones of choice. It has been my experience in teaching that most people prefer to learn all of the various methods.

To insure a patent airway, clear the passages of the mouth and throat of dentures, blood clots or other debris. Be sure the tongue is pulled forward. Place the victim on his side to insure drainage. If the tongue tends to drop back into the throat, you may have to pin it to the casualty's clothing. This sounds cruel, but is better to have a sore tongue than lose a life.(5).

You will note that no emphasis has been placed on treating shock. It is controversial that non-medical personnel would recognize such a condition. If they did, what could they do about it? It seems more logical to stress those procedures that will *prevent* shock – dressing the wound, arresting bleeding, splinting fractures and maintaining patent airways.(5).

The benefits of survival care are numerous. The individual learns of the type of injuries that may occur, and has the gratification of knowing that they, with their own hands and with what equipment is available, can do about them until medical care is available. They can handle routine emergencies that may arise, thereby saving the medical service the added burden of minor injuries.(5).

Summary

Gov. Leo Hoegh, Chief, OCDM, stated that "A fool would hesitate to attack a country that is prepared to survive."(7). In my humble opinion, survival aid is one facet of assuring such a status.

It is a well known fact that the military arsenals possess weapons that can produce millions of casualties, simultaneously. The "American guided missile," the auto, is another lethal weapon, accounting for thousands of casualties daily. It seems to me, numerous lives and limbs could be salvaged from this chaotic, mass murder media, if we knew and practiced the basic principles of first aid.

None of us want another Pearl Harbor. We hope we never hear the words, "Too little, too late," uttered again. Now is the time to purge ourselves of the apathy and complacency in regard to civilian defense. We should prove to the world that women can use their hands, hearts and hands as well as their tongues and vocal cords!

WILLA R. H. KENNEDY
Chairman, Women's Medical Auxiliary, CD,
State of Arizona

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(1) Brochure, "The Irrationality of Communism," Gerhart Niemeyer.

(2) "Brainwashing in Red China," Edward Hunter.

(3) Management Mass Casualties, Brooke AMSS, Oct. 1956. Col. Harold Zepperman.

(4) Management Mass Casualties, Brooke AMSS, Oct. 1956. Dr. C. Blanchard Henry.

(5) Nursing in Management Mass Casualties, WRIR, 1957. Col. Jos. Goldstein.

(6) Symposium on Mouth-to-Mouth Resusitation, AMA Journal, May 17, 1958. D. B. Dill, et al.

(7) Gov. Leo Hoegh, Chief, OCDM. Conference on CD AMA, Nov. 1958.

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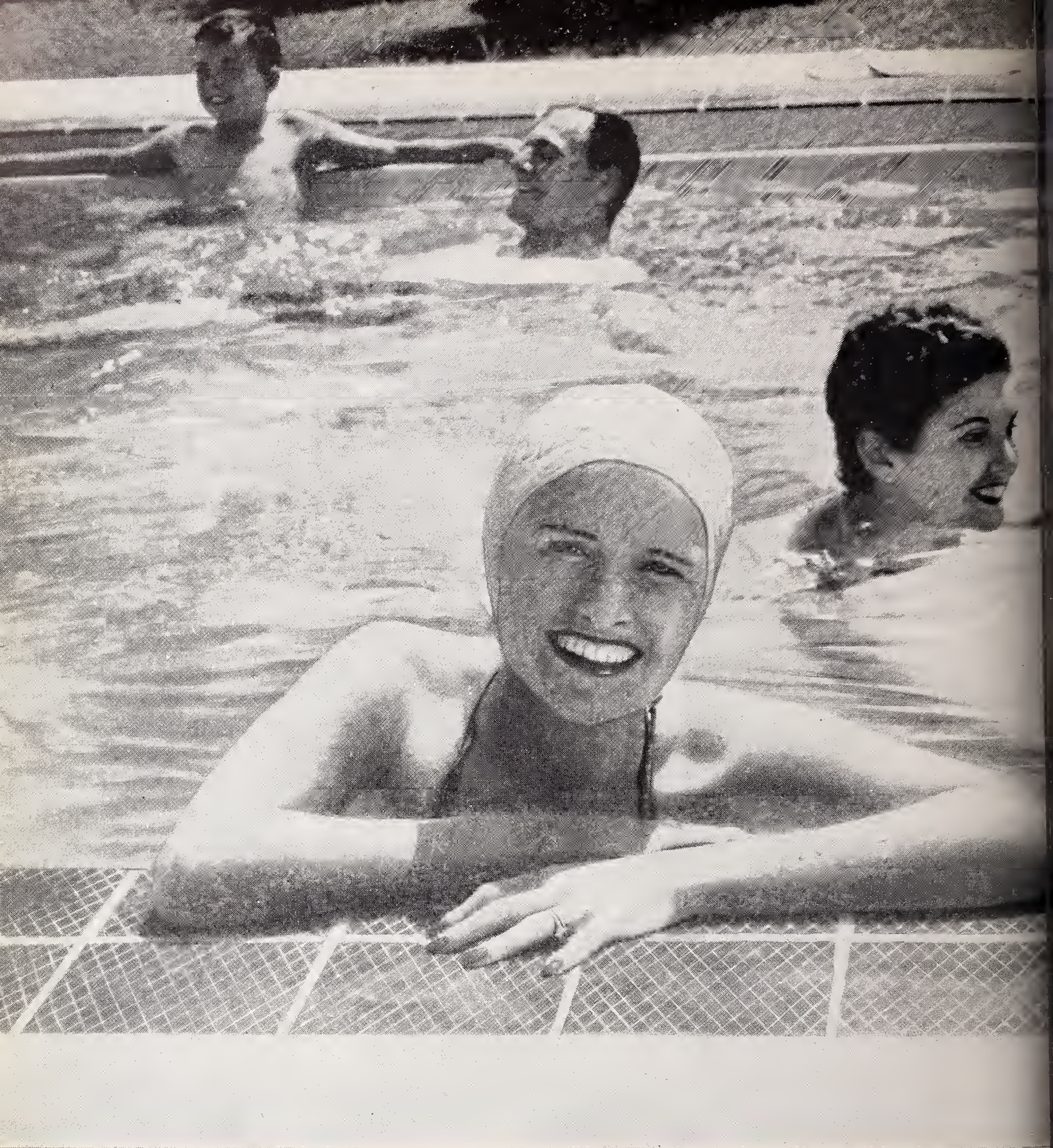

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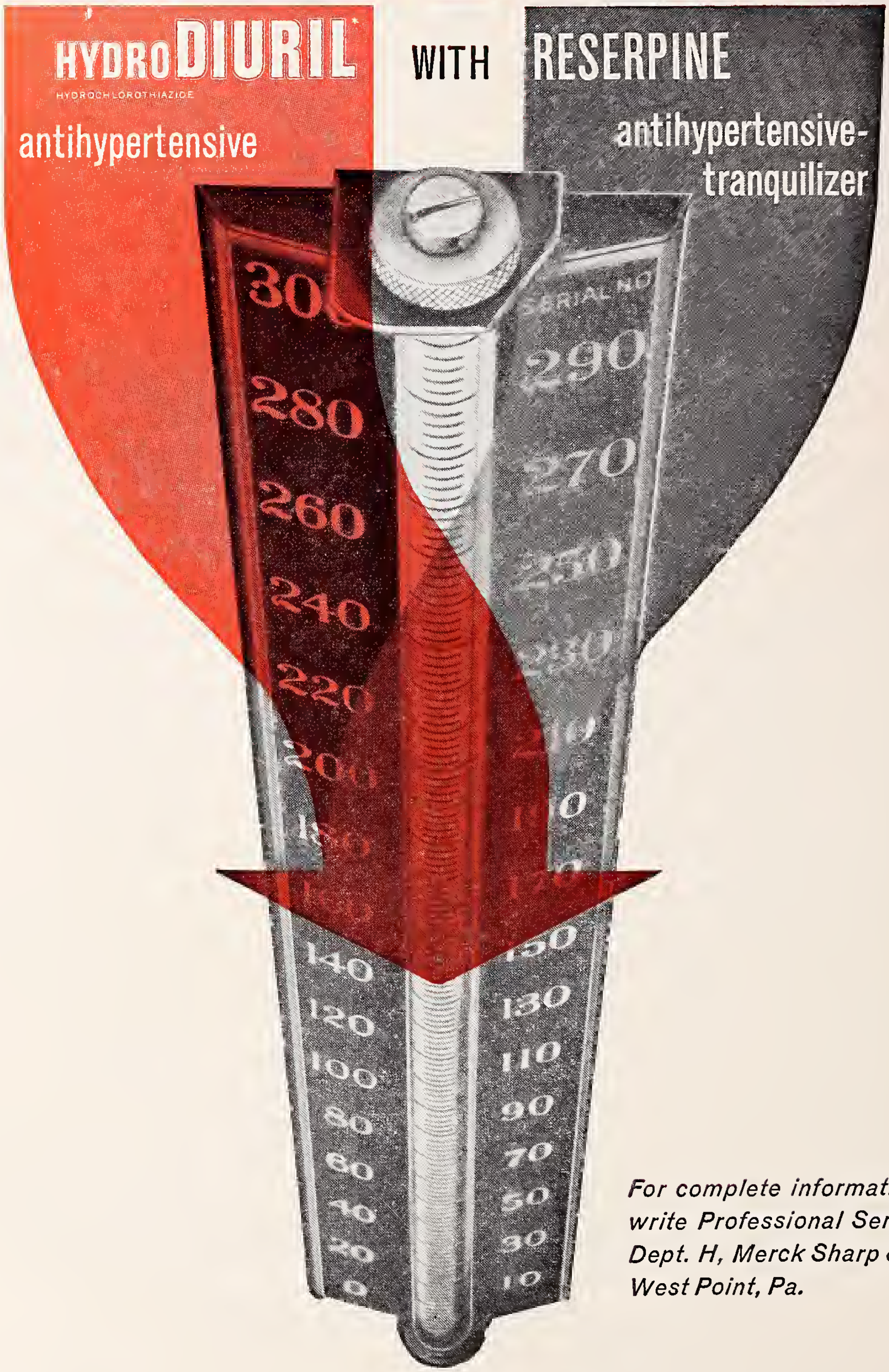

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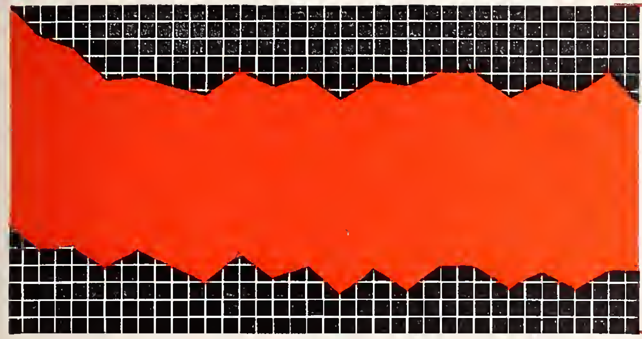

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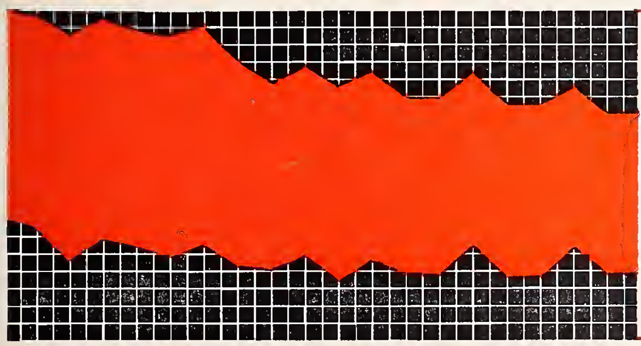

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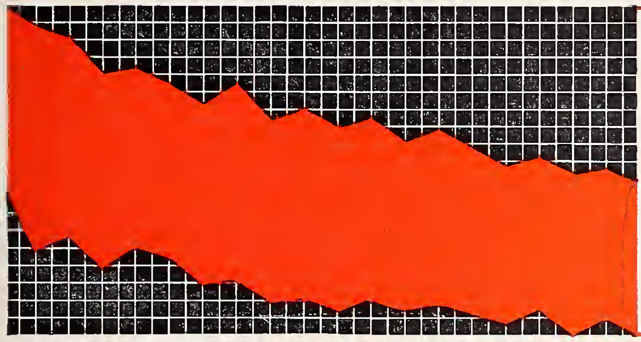

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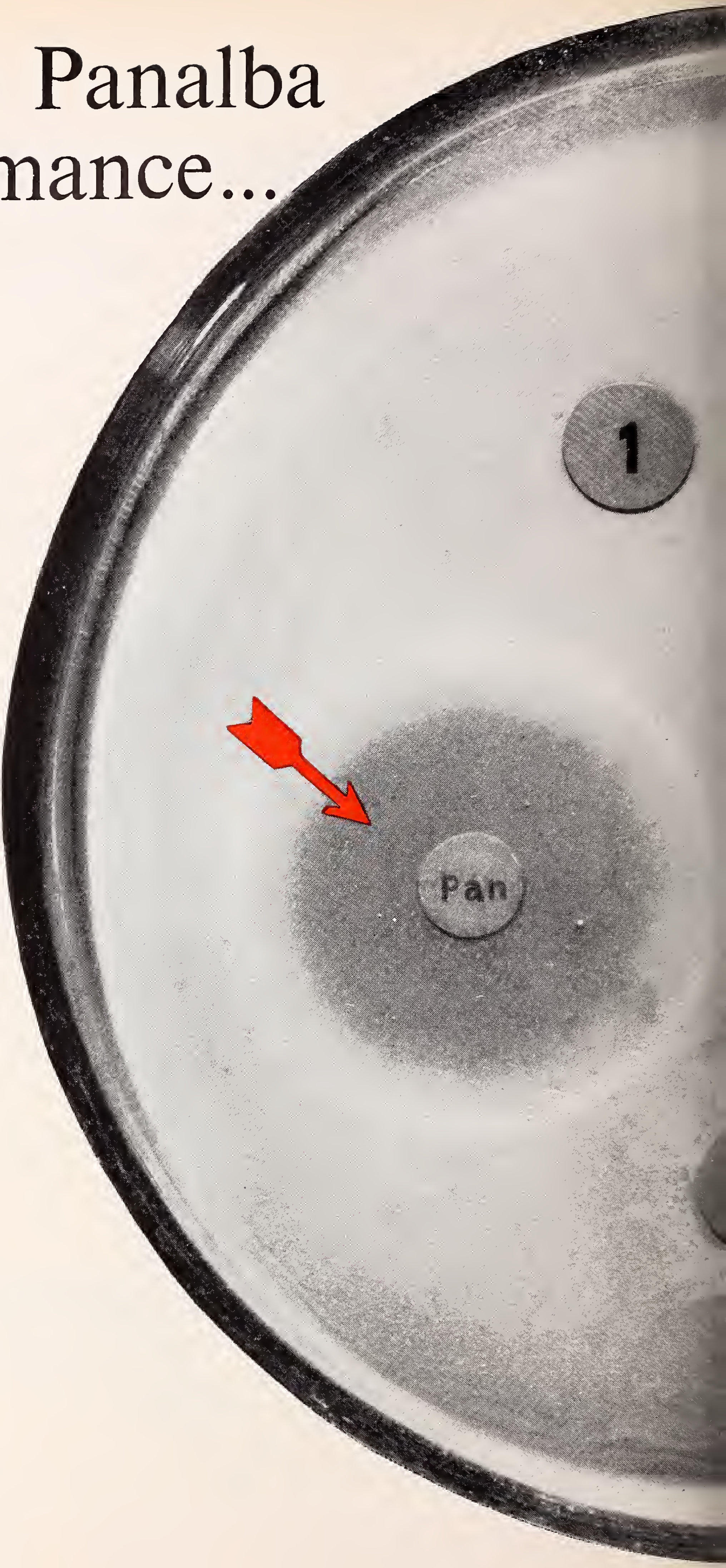

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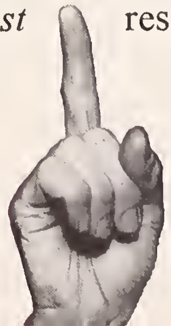

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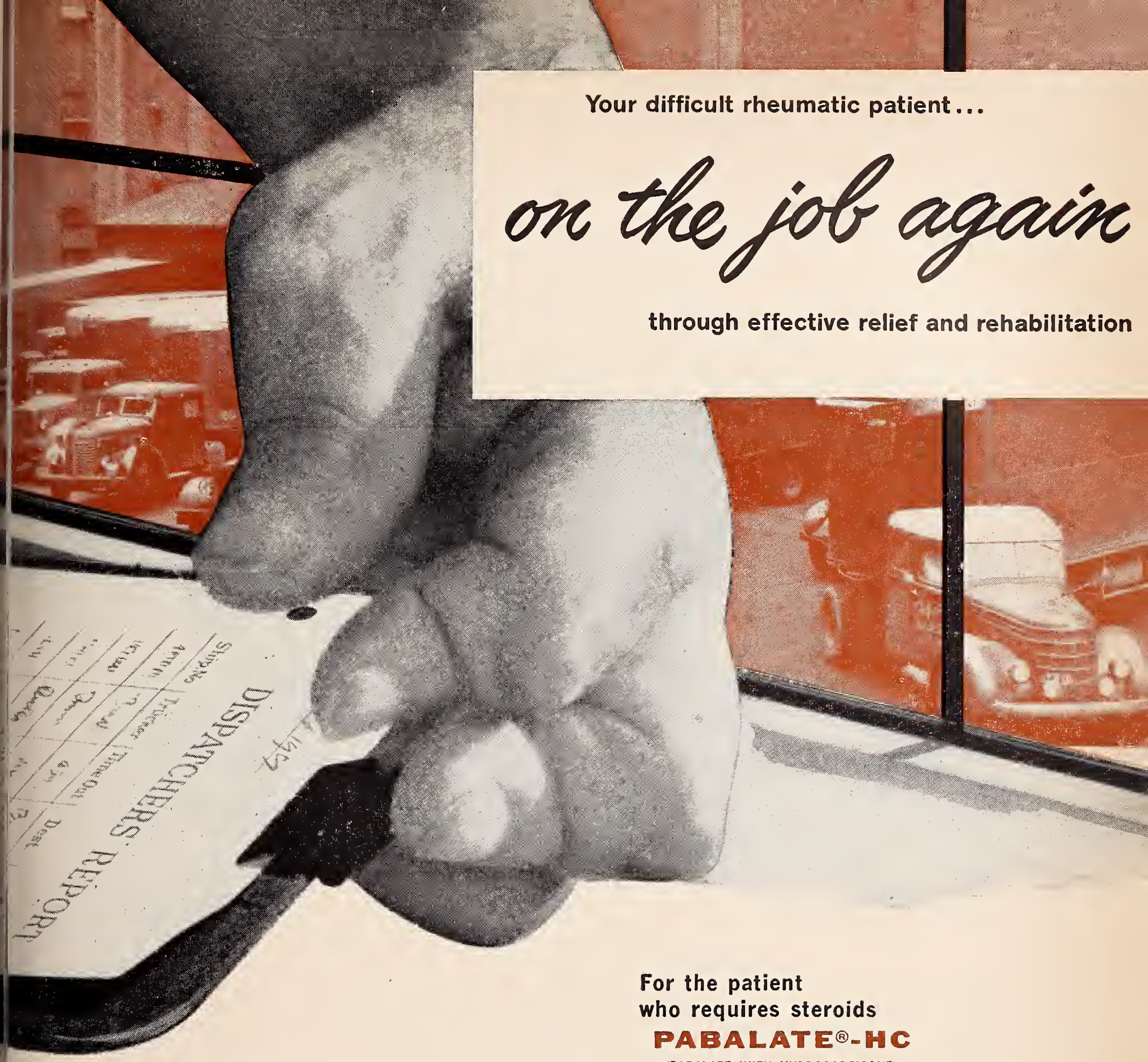

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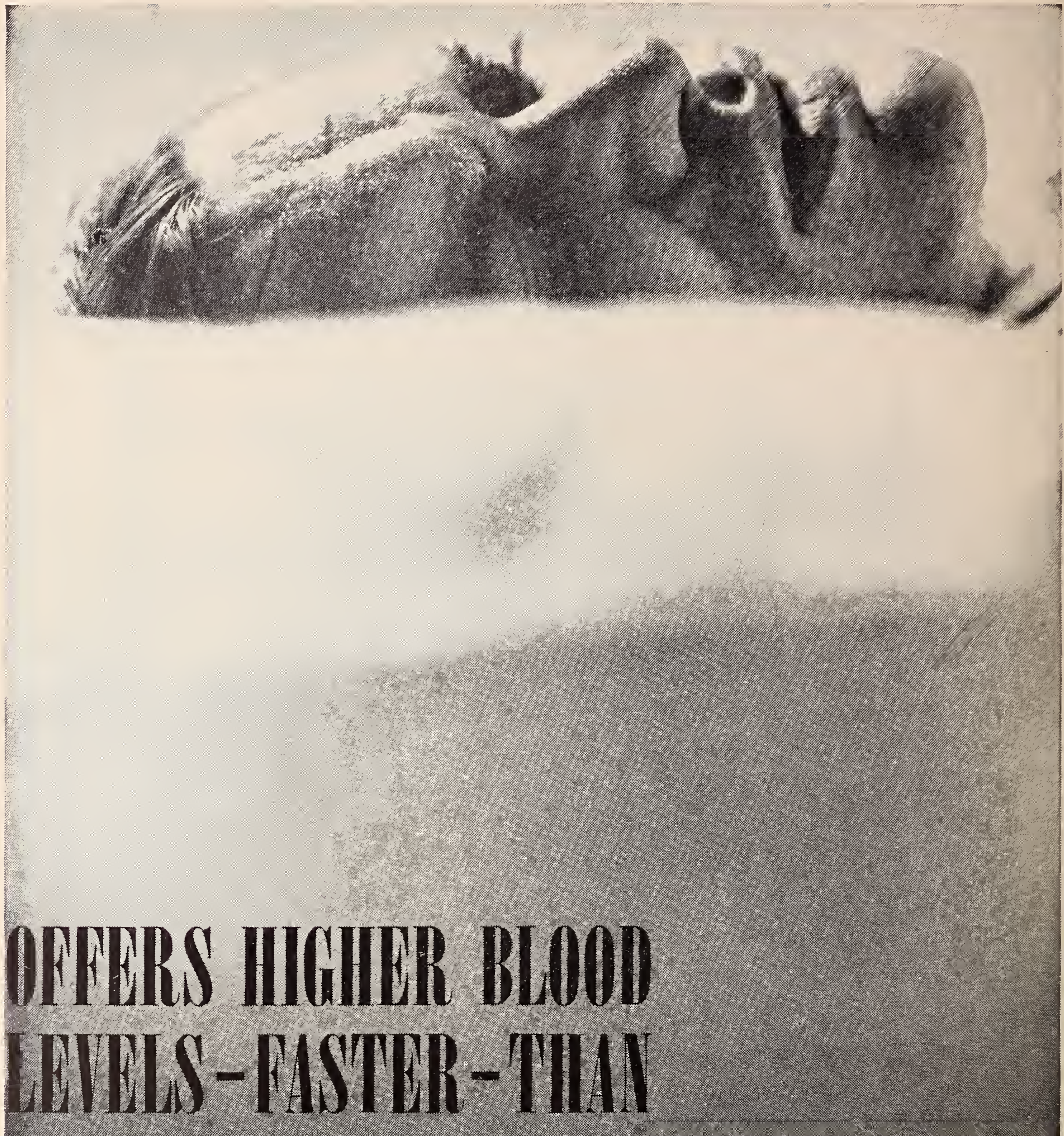

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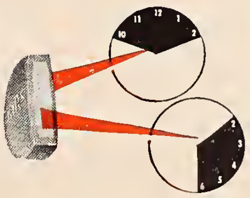

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Each TRIAMINIC Tablet provides:

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One-half of this formula is in the outer layer, the other half is in the core.

Dosage: One tablet in the morning, mid-afternoon and at bedtime.

References: 1. Lhotka, F. M.: Illinois M. J. 112: 259 (Dec.) 1957. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Farmer, D. F.: Clin. Med. 5:1183 (Sept.) 1958.

TRIAMINIC JUVELETS: Each timed-release Juvelet is equivalent in formula and dosage to one-half of a TRIAMINIC tablet, for the adult or child who requires only half strength dosage.

TRIAMINIC SYRUP is recommended for adults and children who prefer liquid medication. Each 5 ml. tsp. is equivalent to ¼ of a Triaminic Tablet. *Adults:* 2 tsp. 3-4 times a day; *children 6-12:* 1 tsp. 3-4 times a day; *children under 6:* in proportion.

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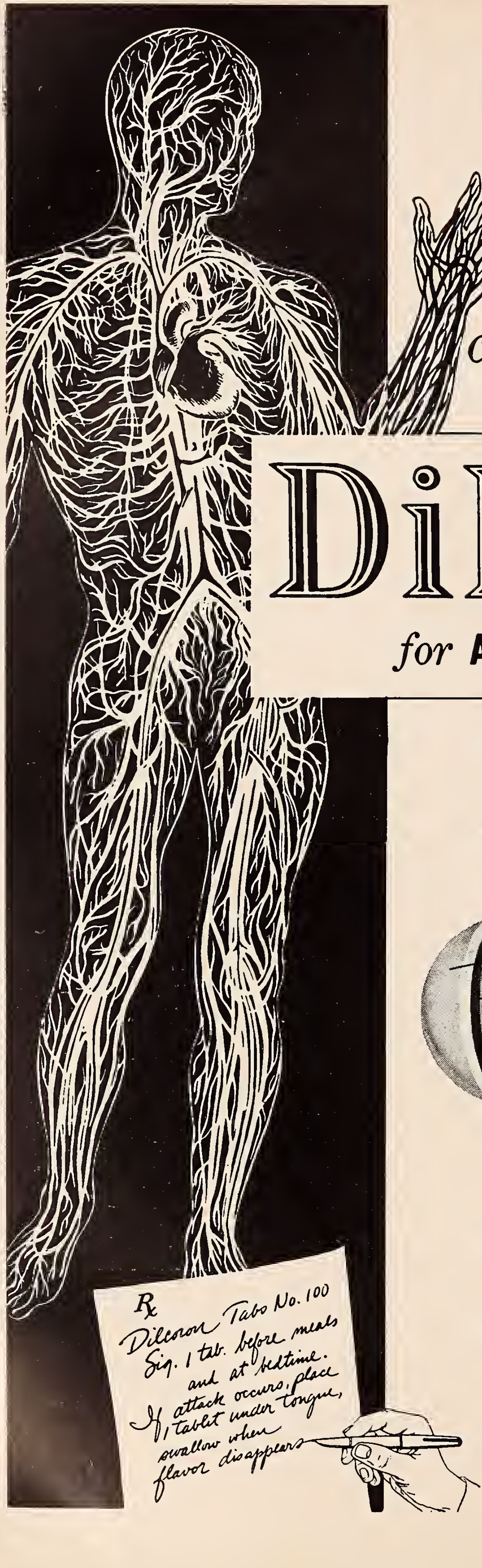

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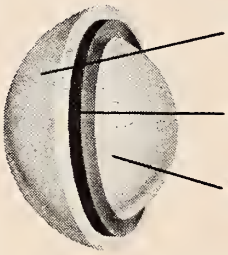

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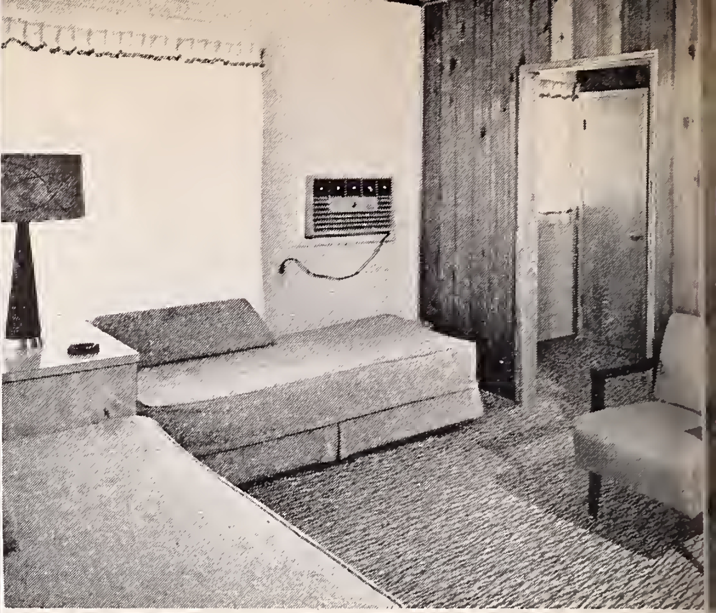

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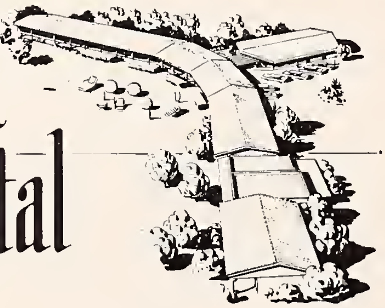

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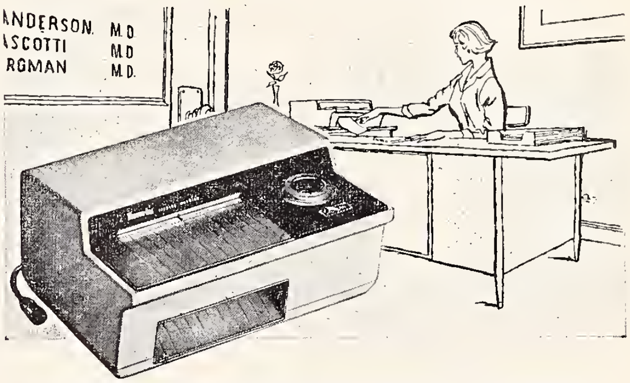

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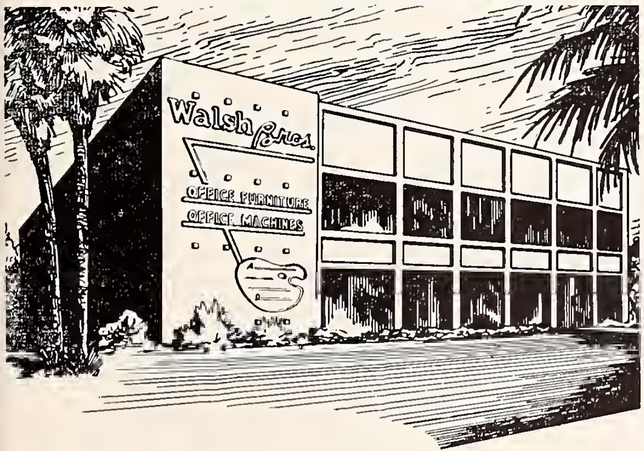

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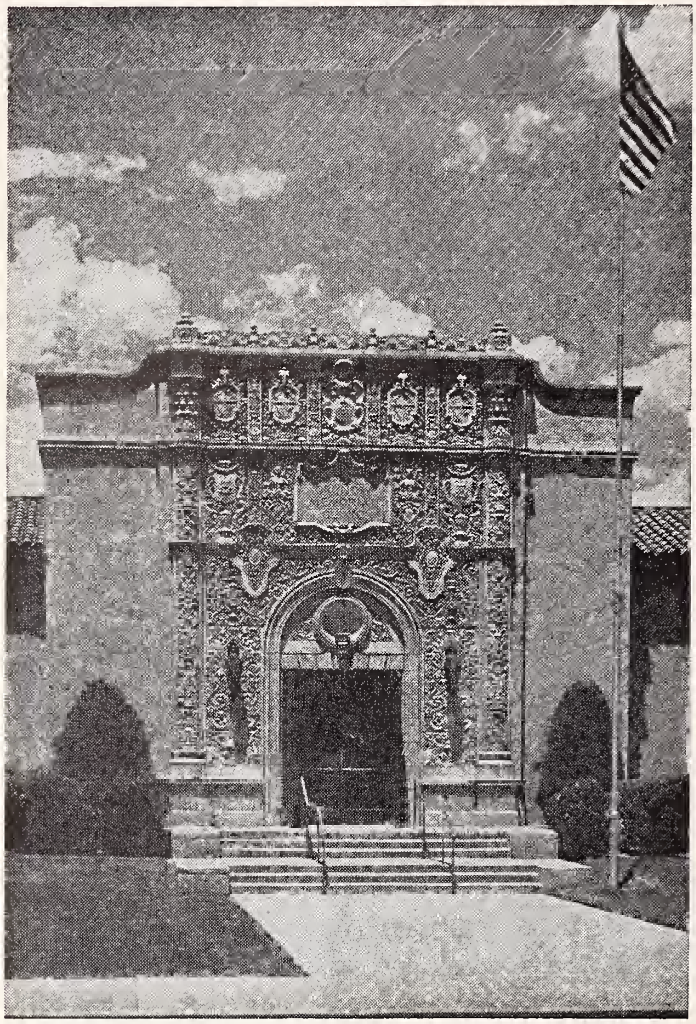

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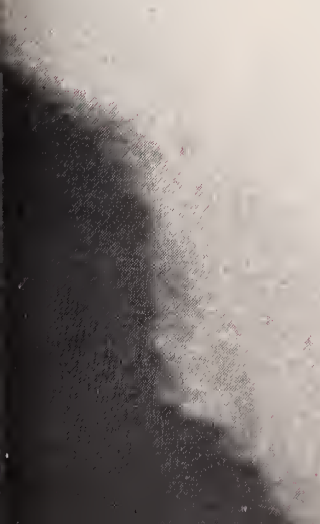

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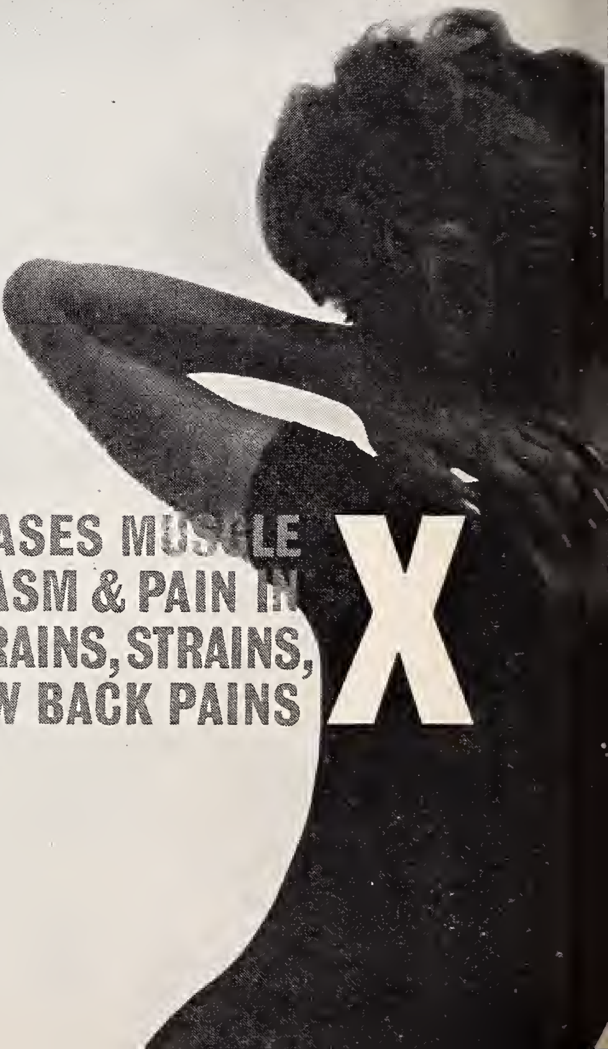

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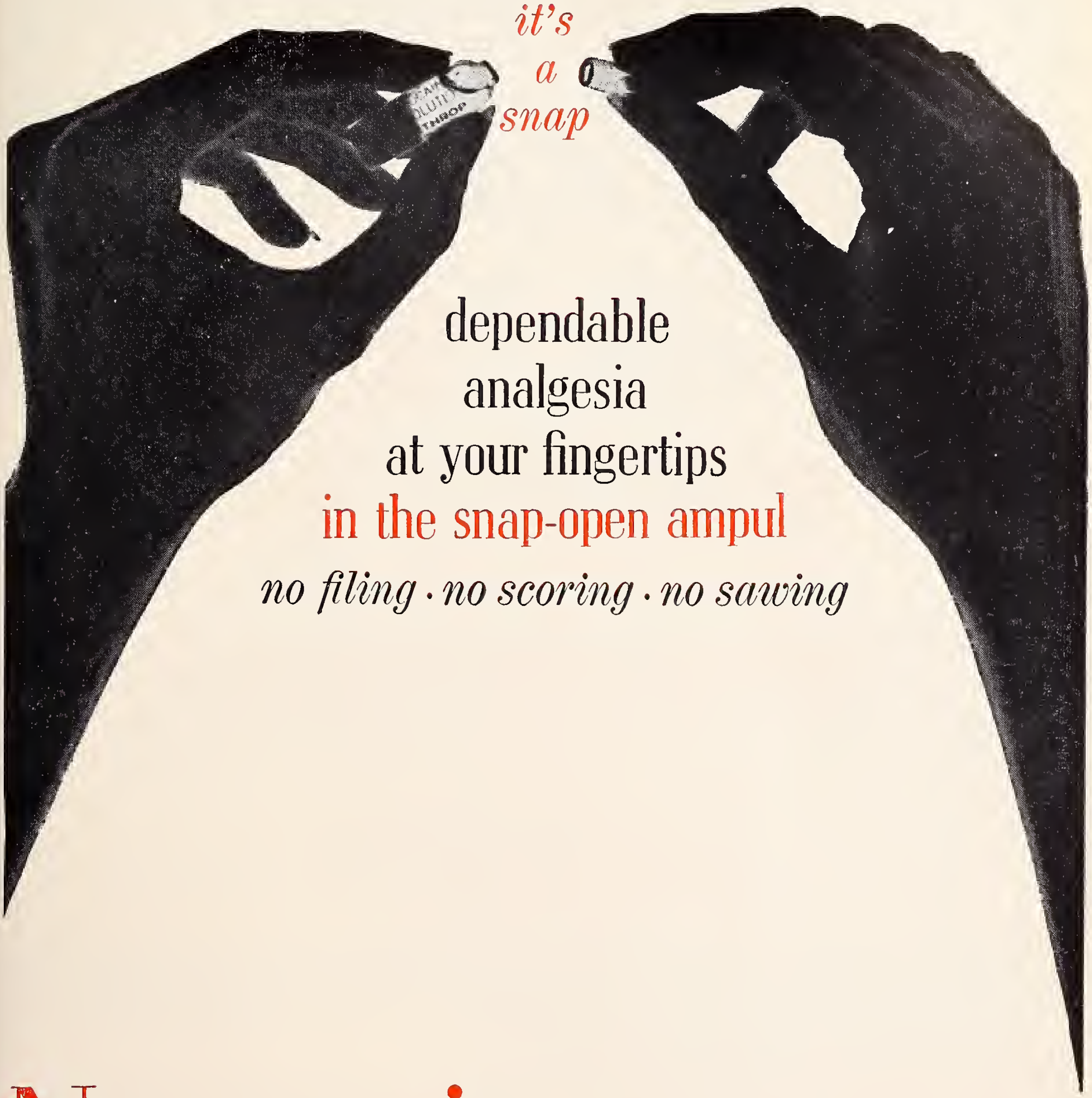

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ARIZONA MEDICINE

Journal of ARIZONA MEDICAL ASSOCIATION

Vol. 16, No. 12, December, 1959

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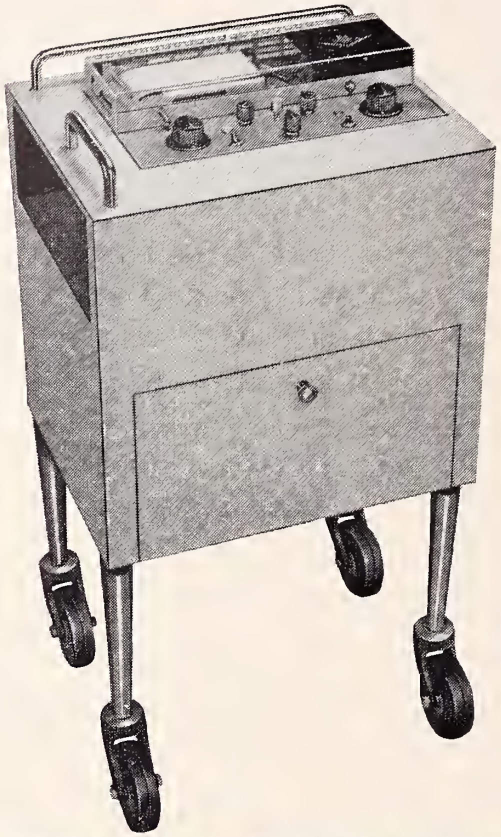
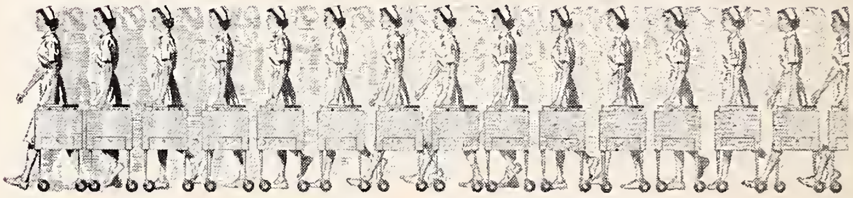
Published monthly by the Arizona Medical Association, Inc. Business office at 801 N. 1st Street, Phoenix, Arizona. Subscription $5 a year, single copy 50 cents. Entered as second class matter March 1, 1921, at Postoffice at Phoenix, Arizona, Act of March 3, 1879.

(The Editors of the Journal assume no responsibility for opinions expressed in the articles contributed by individual members.)





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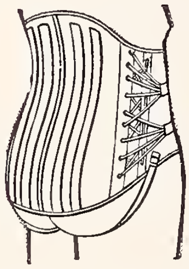

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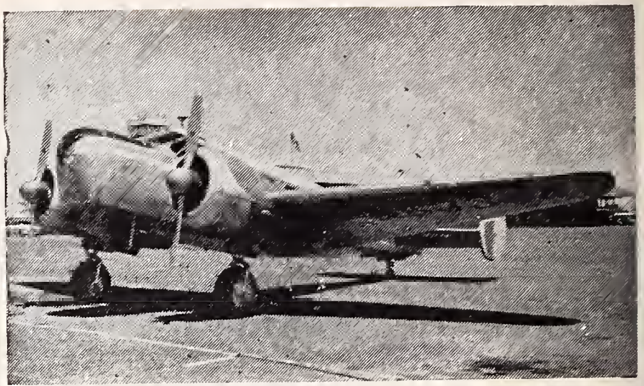

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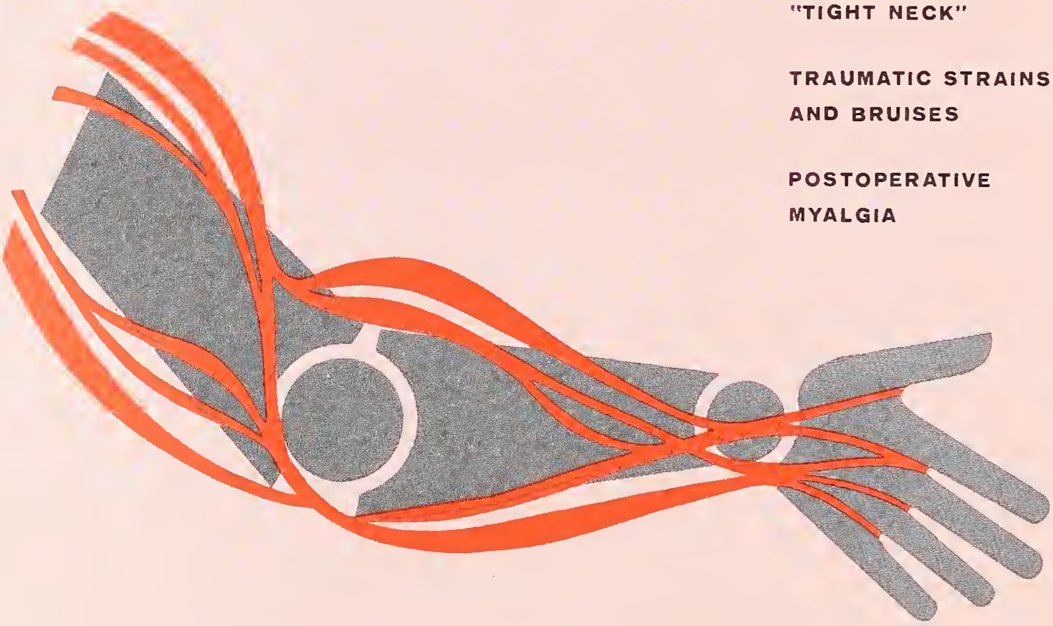

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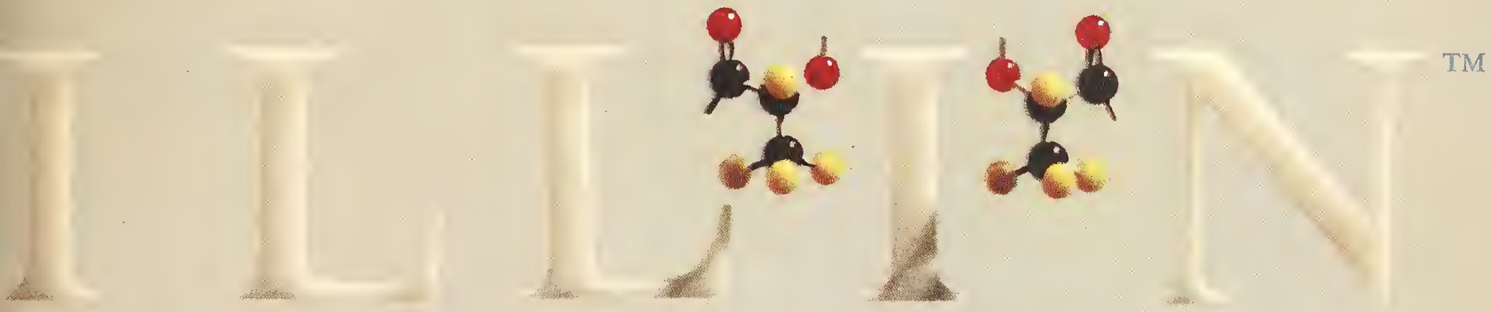

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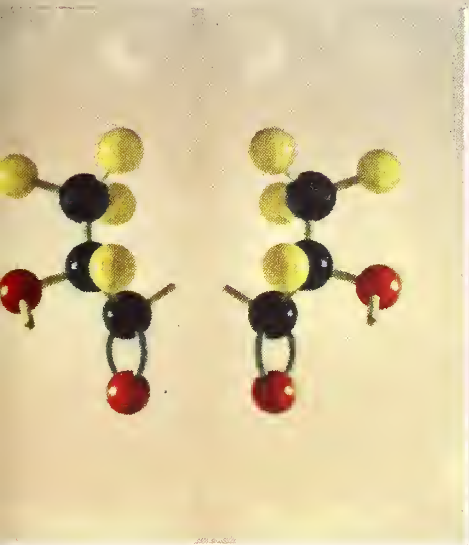

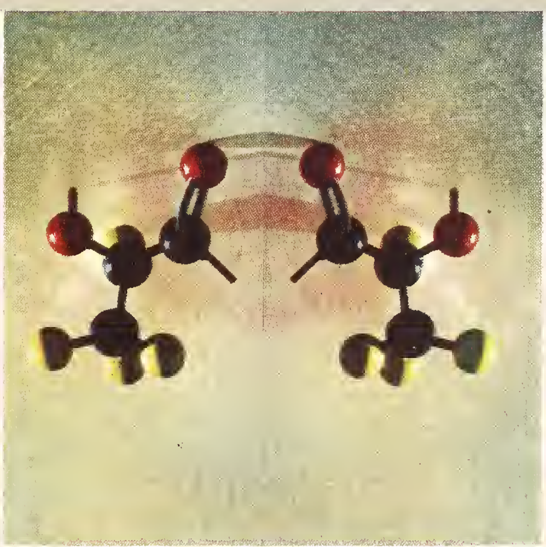

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ORIGIN OF A NEW SYNTHETIC PENICILLIN

In March, 1957, Dr. John C. Sheehan of the Massachusetts Institute of Technology announced the total synthesis of penicillin from common raw materials, thus solving a problem which had baffled research workers for more than 15 years. Although total synthesis was not commercially practicable, this work, sponsored by Bristol Laboratories, made possible the subsequent synthesis of new penicillins not occurring in nature. Later scientists at Beecham Laboratories in England discovered that a key intermediate (6-aminopenicillanic acid) could be produced by a fermentation process. With these achievements, large scale production of synthetic penicillins became feasible.

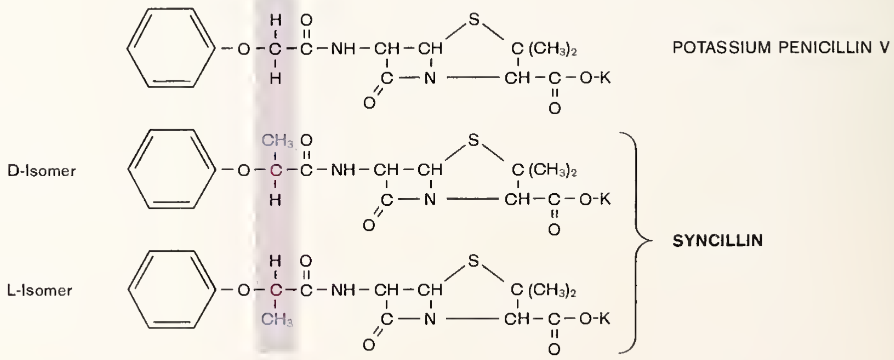
Organic chemists at Bristol then embarked upon an intensive program to develop better penicillins. Over five hundred were synthesized and underwent preliminary screening. Forty-six showed sufficient promise to warrant further investigation. Extensive microbiological, pharmacological, and clinical screening indicated that one compound, SYNCILLIN, had advantages of major importance over other penicillins.

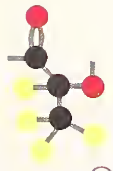
SYNCILLIN is the N-acylation product of 6-aminopenicillanic acid and α-phenoxypropionic acid (the phenylether of lactic acid). It is freely soluble in water and remarkably resistant to decomposition by acid. The acid stability of SYNCILLIN is equivalent to that of penicillin V at pH 2 and pH 3 at 37° C.[1]

SIGNIFICANCE OF MOLECULAR ASYMMETRY AND ISOMERIC COMPLEMENTARITY

SYNCILLIN has a molecular configuration similar to penicillin V, but contains an additional CH_3 group so positioned as to render the adjacent carbon atom asymmetric. (In the formulae below, the added CH_3 group is shown in blue and the asymmetric carbon atom in red.) As a result, SYNCILLIN occurs as a mixture of two isomers.

Each isomer has been synthesized in essentially pure form and found to possess distinctive chemical and biological properties. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. As produced, SYNCILLIN is a mixture of the L-isomer and the D-isomer. As will be shown later, the antibiotic effect of the clinically available mixture, SYNCILLIN, is greater than either isomer alone against many organisms. This phenomenon is referred to here as *isomeric complementarity.*





SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

ISOMERIC COMPLEMENTARITY DEMONSTRATED *IN VITRO*

The *in vitro* minimum inhibitory concentration (MIC) of SYNCILLIN and of each of its two component isomers was determined for a variety of common pathogens and laboratory test organisms. As may be seen from Table 1, all three are highly effective against penicillin-susceptible staphylococci and against pneumococci, streptococci, gonococci, and corynebacteria; all are ineffective against Salmonella, *E. coli,* and other gram-negative coliform bacilli.

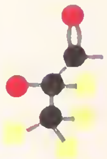
SYNCILLIN was more active against many of the test strains including some streptococci and staphylococci than either of its components. This demonstrates *in vitro* the phenomenon of isomeric complementarity.

TABLE 1

Minimum Concentrations of SYNCILLIN and Components
Required to Inhibit a Wide Range of Bacteria

	Minimum Inhibitory Concentration (MIC) in Micrograms per Milliliter		
	L-Isomer	D-Isomer	SYNCILLIN
Bacillus anthracis	0.06	0.25	0.03
Bacillus cereus	12.5	100	25
Bacillus circulans ATCC 9961	6.25	6.25	6.25
Corynebacterium xerosis	0.06	0.125	0.03
*Diplococcus pneumoniae	0.06	0.06	0.06
Escherichia coli ATCC 8739	>100	>100	>100
Gaffkya tetragena	0.015	0.03	0.015
Micrococcus flavus	0.015	0.125	0.015
Salmonella paratyphi A	25	50	25
Salmonella typhosa	>100	>100	>100
Sarcina lutea ATCC 10054	0.007	0.12	0.007
Shigella sonnei	100	100	100
Staphylococcus aureus 209P	0.06	0.125	0.03
Staphylococcus aureus var. Smith	0.03	0.125	0.03
Streptococcus agalactiae ATCC 1077	0.03	0.06	0.03
Streptococcus dysgalactiae ATCC 9926	0.03	0.06	0.03
Streptococcus faecalis PCI 1305	6.25	25	6.25
*Streptococcus pyogenes 203	0.06	0.06	0.06
*Streptococcus pyogenes Digonnet	0.03	0.15	0.06
Streptococcus pyogenes 2320	0.06	0.06	0.03
Streptococcus pyogenes 23586	0.06	0.06	0.06
Vibrio comma	50	25	25

Serial dilution technique in heart infusion broth   *10% serum added



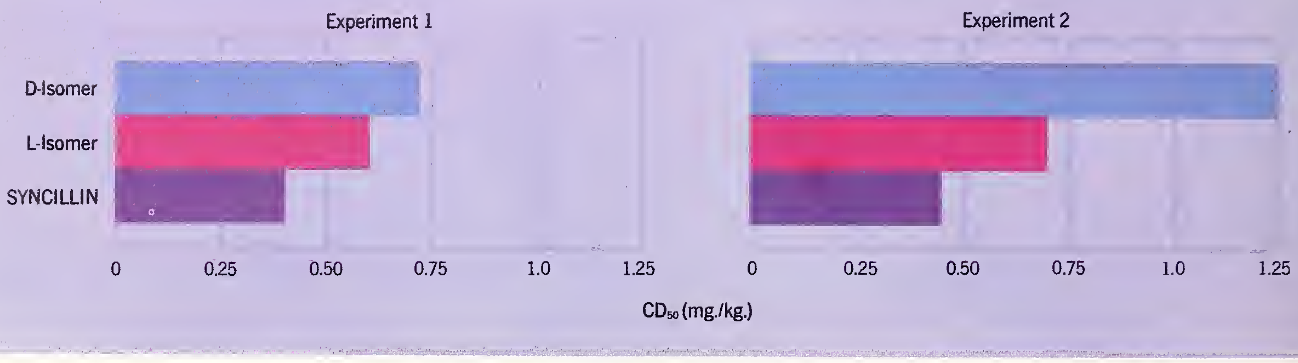
SYNCILLIN

major therapeutic advantages accompany molecular asymmetry

ISOMERIC COMPLEMENTARITY CONFIRMED *IN VIVO*

To determine the median curative dose (CD_{50}) mice were infected with 100 times the lethal dose of *Staphylococcus aureus.* Each penicillin being tested was administered intramuscularly at the same time, and the dose required to cure half the animals determined. The greater effect of the mixture of the two isomers (SYNCILLIN) is shown in two independent experiments. (See Figure 1.) Note that isomeric complementarity is thus confirmed *in vivo.*

FIGURE 1 — Median Curative Dose (CD_{50}) for *Staphylococcus aureus* (var. Smith) Infections

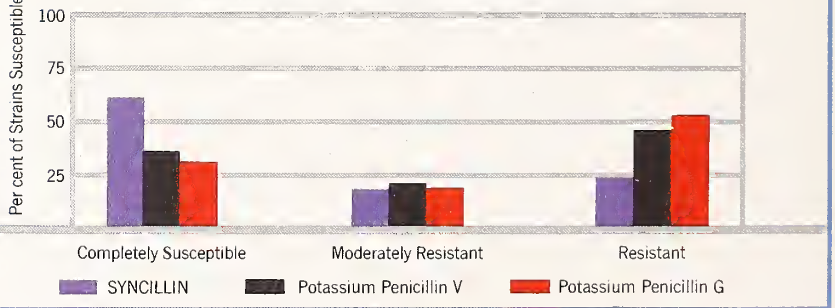


MANY STRAINS OF STAPHYLOCOCCI MORE SENSITIVE TO SYNCILLIN

SYNCILLIN has been tested against a large number of strains of *Staphylococcus aureus* isolated from clinical sources. Many organisms resistant to potassium penicillin G and potassium penicillin V proved sensitive to SYNCILLIN.

Wright[2] performed sensitivity studies on 54 strains, the majority of which were resistant or moderately resistant to penicillin V and penicillin G. Thirty-two (60%) of the strains were sensitive to SYNCILLIN, approximately twice as many as with the other penicillins. (See Figure 2.) In two-thirds of the isolates, SYNCILLIN produced inhibition at concentrations lower than those required for either of the other antibiotics. One strain was more sensitive to penicillin G.

FIGURE 2 – *In Vitro* Sensitivity of 54 Strains of Coagulase-Positive *Staphylococcus aureus* from Clinical Sources



Adapted from Wright[2]

SYNCILLIN

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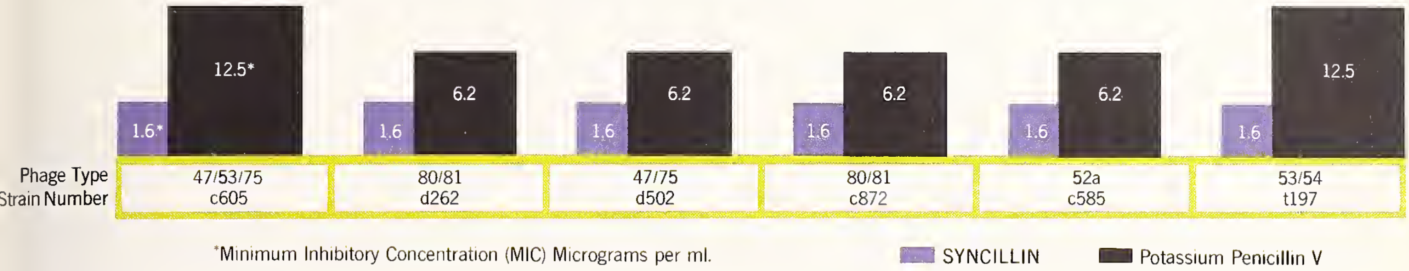
Of equal interest are the findings of White.[3] Six penicillin-resistant strains of staphylococci were isolated from hospital infections. None was sensitive to potassium penicillin V. All were sensitive to SYNCILLIN. (See Figure 3.)

FIGURE 3

Minimum Concentrations of SYNCILLIN Required to Inhibit Hospital Strains of *Staphylococcus aureus* Resistant to Potassium Penicillin V

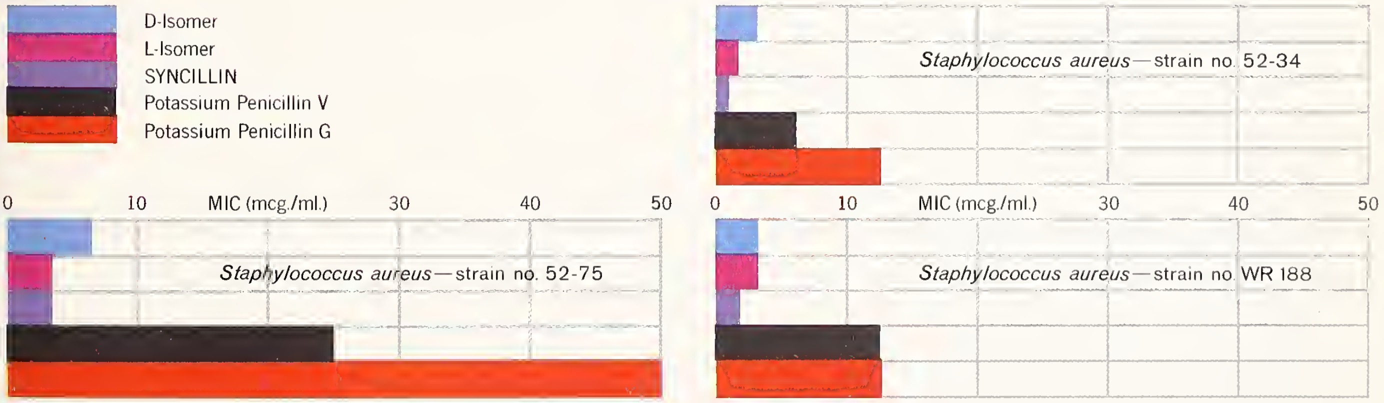


The efficacy of SYNCILLIN against the type 80/81 Staphylococcus (dangerous and widespread in hospitals) is worthy of special attention.

The complementary action of the component isomers is also seen with strains of staphylococci resistant to penicillins. Note that SYNCILLIN is more effective than either isomer against strains 52-34 and WR 188. (See Figure 4.) Against all three strains, SYNCILLIN is effective at concentrations below serum levels, while penicillins V and G are ineffective.

FIGURE 4

Minimum Inhibitory Concentrations (MIC) for Coagulase-Positive Penicillin-Resistant Strains of *Staphylococcus aureus*



Isomeric complementarity has thus been demonstrated for:

— certain penicillin-susceptible streptococci, staphylococci and corynebacteria in vitro *(Table 1)*

— penicillin-susceptible staphylococci in vivo *(Figure 1)*

— penicillin-resistant staphylococci in vitro *(Figure 4)*

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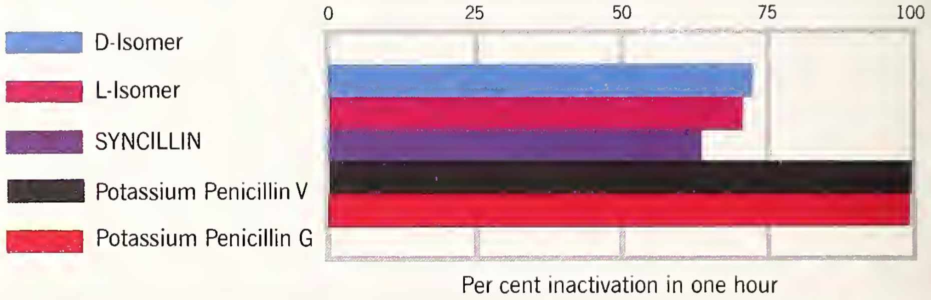
ISOMERIC COMPLEMENTARITY SHOWN BY REDUCED RATE OF INACTIVATION BY PENICILLINASE

Bacterial resistance to penicillin has been attributed to the action of penicillin-inactivating enzymes produced by the invading organisms.[4] As shown in Figure 5, SYNCILLIN is less affected by staphylococcal penicillinase than either of its component isomers — a further demonstration of isomeric complementarity. Further, SYNCILLIN is shown to be less inactivated by this enzyme than penicillin V and penicillin G.

Resistance to SYNCILLIN develops in a slow, step-wise manner characteristic of other penicillins, in contrast to the usually rapid development of resistance to streptomycin.

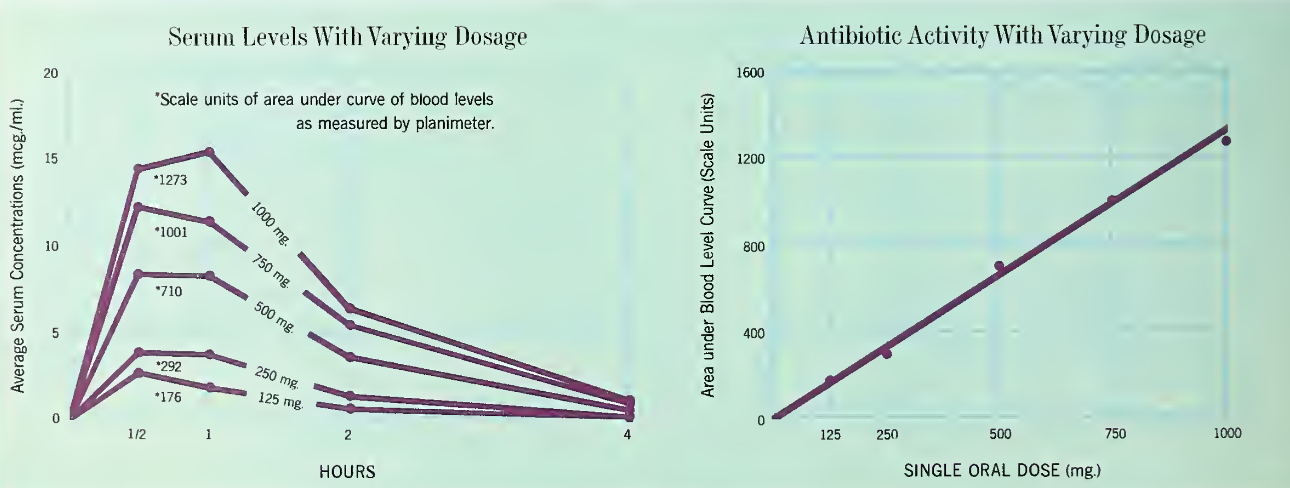
FIGURE 5—Effect of Staphylococcal Penicillinase on Different Penicillins



ANTIBIOTIC ACTIVITY DIRECTLY PROPORTIONAL TO ORAL DOSAGE

Cronk[5] studied blood levels after administering varying amounts of SYNCILLIN. (Figure 6.) Total antibiotic activity (obtained by measuring areas under curves with a planimeter) increases rapidly as the dose is doubled. These data show that increased dosage markedly increases serum concentration and thus may enhance the drug's effectiveness.

FIGURE 6



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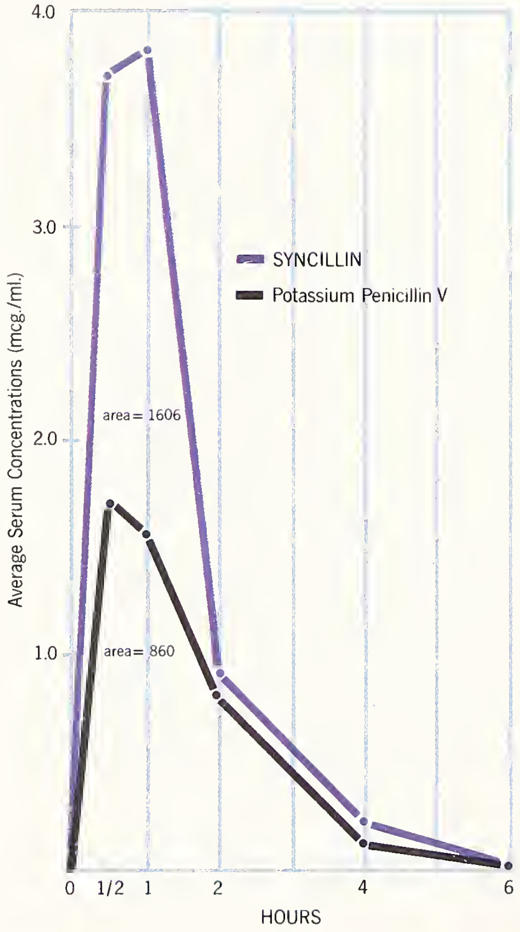
BLOOD LEVELS TWICE AS HIGH AS WITH POTASSIUM PENICILLIN V AFTER ORAL ADMINISTRATION

Wright[6] performed comparative crossover blood level studies on volunteer subjects receiving equivalent amounts of potassium penicillin V and SYNCILLIN. The peak concentrations attained during the first hour after administration were twice as high with SYNCILLIN.

The total antibiotic activity as measured by the area under the curves (see Figure 7) indicates an almost 2 to 1 superiority of SYNCILLIN (1606) over potassium penicillin V (860).

The higher blood levels may be of value with organisms of only moderate penicillin-sensitivity where doubling the blood concentration may be essential for effective bactericidal action. In addition these higher levels may be necessary where there is infection in areas with a poor blood supply.[7] Under these circumstances a higher blood concentration may provide the increased diffusion pressure required to deliver adequate amounts to the tissue.

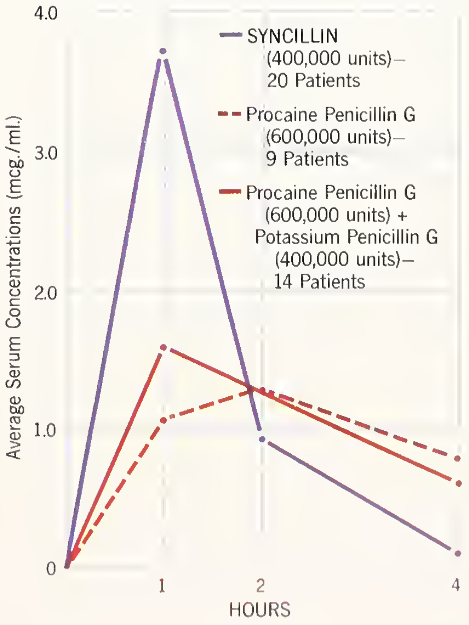
FIGURE 7
20 Subject Crossover
250 mg. Single Dose

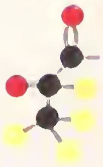


BLOOD LEVELS MUCH HIGHER THAN WITH INTRAMUSCULAR PENICILLIN G

In addition, blood levels attained with oral SYNCILLIN[6] are much higher than those with intramuscular penicillin G.[8a, b] (See Figure 8.) Note that the level at one hour for SYNCILLIN (3.8 mcg./ml.) is more than twice as high as with procaine penicillin G, even when reinforced with potassium penicillin G (1.6 mcg./ml.). Since penicillins are *bactericidal*, these intermittent high serum levels can be clinically significant. Thus, SYNCILLIN offers the promise of superior efficacy via the safer oral route.

FIGURE 8—Serum Levels after Oral Administration of SYNCILLIN (250 mg.) and after Intramuscular Injection of Penicillin G





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REDUCED HAZARD OF SERIOUS ALLERGENICITY BY SAFER ORAL ROUTE

SYNCILLIN has been administered in multiple doses to 437 patients and volunteers. One patient developed itching during therapy, possibly an allergic side effect. Another had a purpuric rash, but no relationship to SYNCILLIN was established. No reactions were observed in 9 patients with a known history of sensitivity to penicillin.

While the above data suggests the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *The usual precautions for oral penicillin therapy should be observed.* Patients with histories of asthma, hay fever, urticaria, or previous penicillin-sensitivity should especially be watched carefully. Since SYNCILLIN is administered orally, it may be expected to be safer than parenteral penicillin.

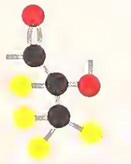
As Flippin[9] recently stated, "... it is well established that serious allergy to the drug [penicillin] is most likely to occur following parenteral administration, especially after repeated intramuscular injections; the oral route is least likely to initiate severe hypersensitivity reactions. This can be explained partly by the fact that when reactions develop following oral medication, they are usually slow enough to treat symptomatically; thus the progression of the reaction can usually be interrupted. ... In view of the relatively high incidence of severe allergy to injectable penicillin, it would seem advisable to employ oral penicillin routinely, except in the control of infections involving the blood stream, endocardium, meninges, etc., in which cases the parenteral route remains the preferred treatment."

SYNCILLIN, like other penicillins, is essentially free of other toxicity. No hematopoietic, hepatic, or renal toxicity was observed in 210 volunteers receiving 1 gm. daily for 2 to 3 weeks.[10]

CLINICAL EFFICACY DEMONSTRATED IN PENICILLIN-SENSITIVE INFECTIONS

Clinical trials conducted by Blau and Kanof,[11] White,[12] Prigot,[13] Robinson,[14] Dube,[15] Ferguson,[16] Rutenburg,[17] Richardson,[18] Bunn,[19] Cronk,[5] Kligman,[10] and Yow [20] demonstrated the efficacy of SYNCILLIN in a variety of streptococcal, staphylococcal, pneumococcal, and gonococcal infections. Conditions treated included respiratory, skin, soft tissue, wound, and chronic urinary tract infections; acute gonorrhea; cellulitis; septicemia; otitis media; gingivitis; and Vincent's angina. In a few patients SYNCILLIN was used for rheumatic fever or gonorrheal prophylaxis.

One hundred seventy-two of one hundred ninety-six patients responded favorably to SYNCILLIN. The failures included 1 patient with pustular dermatoses, 10 elderly patients with chronic urinary tract infections, 1 patient with gonorrhea, 1 patient with a gram-negative infection, and 10 patients with staphylococcal infections. Lack of response of staphylococcal infections was attributed to the presence of resistant organisms or local suppurative foci requiring drainage.



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Relatively few side effects were encountered. One patient experienced moderate itching of the skin which was controlled by an antihistamine. Another reported pruritus ani which did not interfere with therapy. Diarrhea occurred in 4 instances. There was one purpuric rash, but no relationship to SYNCILLIN could be established.

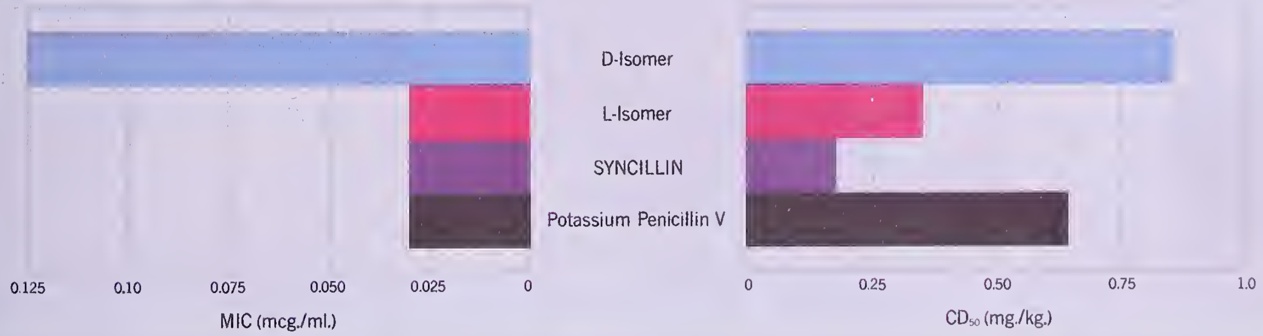
Clinical response usually begins within 24 hours in infections susceptible to SYNCILLIN. Recovery occurs in 4 to 7 days depending upon the severity of the infection. Gonorrheal infections respond very promptly to SYNCILLIN; 500 mg. b.i.d. for two days usually produce bacteriologic cures.

IMPROVED ANTIBIOTIC EFFECT FROM COMPLEMENTARY ACTION OF ISOMERS

SYNCILLIN is a mixture of isomers. The L-isomer is 2 to 17 times more active than the D-isomer against many of the organisms tested. Furthermore, the D- and L-isomers have other distinguishing chemical, pharmacological, and microbiological properties. Their *in vivo* and *in vitro* activities differ for many important pathogens. *Against many of the organisms tested, the combination of isomers* (SYNCILLIN) *is much more active than the stronger isomer alone.* This phenomenon of isomeric complementarity is not always demonstrable, for in a few instances SYNCILLIN is slightly less active.

Isomeric complementarity has previously been demonstrated *in vitro* (Figure 4) and *in vivo* (Figure 1). Figure 9 reveals a third form of superiority related to isomeric complementarity. Equal concentrations of SYNCILLIN and penicillin V were required to inhibit this growth of staphylococci *in vitro*. But, *in vivo*, a much smaller amount of SYNCILLIN *(one-third that of penicillin V)* was effective in an experimental infection with the same strain. These observations on complementary action indicated the advantage of producing the mixture of isomers as the medication to be made available for clinical therapy.

FIGURE 9 — Comparison of CD_{50} and MIC Values Against *Staphylococcus aureus* (var. Smith)



Isomeric complementarity has thus been demonstrated for:

—— *certain penicillin-susceptible streptococci, staphylococci and corynebacteria* in vitro *(Table 1)*

—— *penicillin-susceptible staphylococci* in vivo *(Figures 1 and 9)*

—— *penicillin-resistant staphylococci* in vitro *(Figure 4)*

—— *staphylococcal penicillinase antibiotic inactivation (Figure 5)*

Indications:

SYNCILLIN is recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci. In addition, SYNCILLIN is effective against certain strains of staphylococci resistant to other penicillins.

SYNCILLIN, like other oral penicillins, is not recommended at the present time in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis, or syphilis.

Dosage:

125 mg. or 250 mg. three times daily, depending on the severity of infection. Larger doses (e.g., 500 mg. t.i.d.) may be used for more severe infections. SYNCILLIN may be administered without regard to meals.

Beta hemolytic streptococcal infections should be treated with SYNCILLIN for at least ten days.

Precautions:

While present data suggest the possibility of reduced allergenic hazard, no definite conclusions may be drawn at this time. *Therefore the usual precautions with oral penicillin therapy must be observed.* Patients with histories of asthma, hay fever, urticaria, or previous reactions to penicillin should be watched with special care.

Diarrhea has been reported occasionally following heavy dosage. If this occurs, the interval between dosages should be lengthened.

If superinfection occurs during therapy, appropriate measures should be taken.

Since some strains of staphylococci are resistant to SYNCILLIN as well as to other penicillins, cultures and sensitivity tests should be performed where indicated by clinical judgment. As is true with all antibiotics, clinical response does not always correlate with laboratory bacterial sensitivity reports.

Supply:

125 and 250 mg. tablets, bottles of 25 and 100. 125 mg. powder for oral solution, 60 ml. vials.

References: 1. Lein, J.: Microbiology report to Bristol Laboratories Inc. 2. Wright, W. W.: Microbiology report to Bristol Laboratories Inc. 3. White, A. C.: Microbiology report to Bristol Laboratories Inc. 4. Dubos, R. J.: Bacterial and Mycotic Infections of Man, 3rd edition, Philadelphia, J. B. Lippincott Co., p. 690. 5. Cronk, G. A.: Clinical report to Bristol Laboratories Inc. 6. Wright, W. W.: Clinical report to Bristol Laboratories Inc. 7. Kass, E. H.: Am. J. Med. *18*:764 (May) 1955. 8a. White, A. C.; Couch, R. A.; Foster, F.; Calloway, J.; Hunter, W., and Knight, V.: in Welch, H. and Marti-Ibañez, F.: Antibiotics Annual — 1955-1956, Medical Encyclopedia, Inc., New York, 1956, p. 490. b. Data on file — at Bristol Laboratories. 9. Flippin, H. F.: Pennsylvania M. J. *62*:864 (June) 1959. 10. Kligman, A.: Clinical report to Bristol Laboratories Inc. 11. Blau, S., and Kanof, N.: Clinical report to Bristol Laboratories Inc. 12. White, A. C.: Clinical report to Bristol Laboratories Inc. 13. Prigot, A.: Clinical report to Bristol Laboratories Inc. 14. Robinson, C.: Clinical report to Bristol Laboratories Inc. 15. Dube, A. H.: Clinical report to Bristol Laboratories Inc. 16. Ferguson, B.: Clinical report to Bristol Laboratories Inc. 17. Rutenburg, A. M.: Clinical report to Bristol Laboratories Inc. 18. Richardson, J. H.: Clinical report to Bristol Laboratories Inc. 19. Bunn, P. A.: Clinical report to Bristol Laboratories Inc. 20. Yow, E. M.: Clinical report to Bristol Laboratories Inc.

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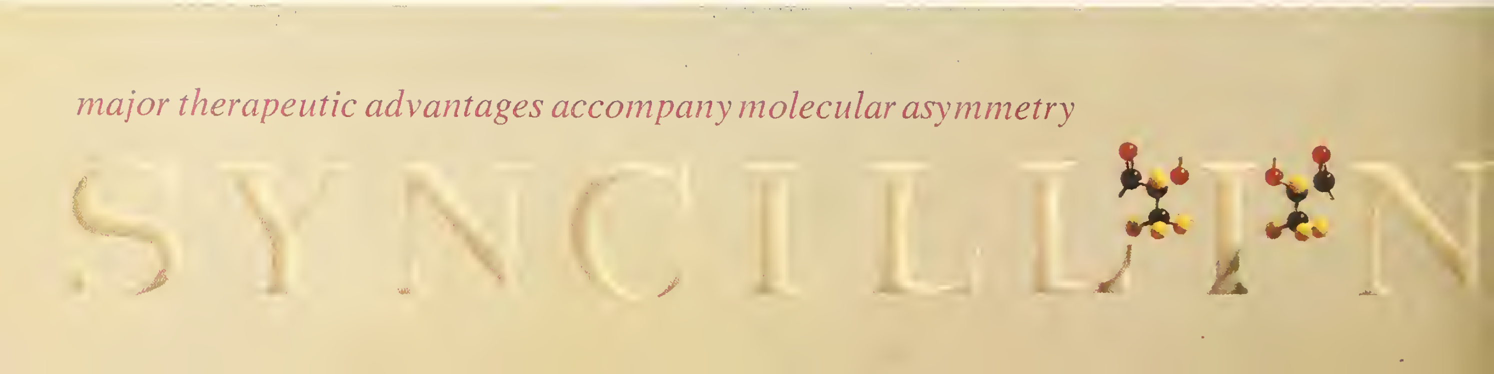
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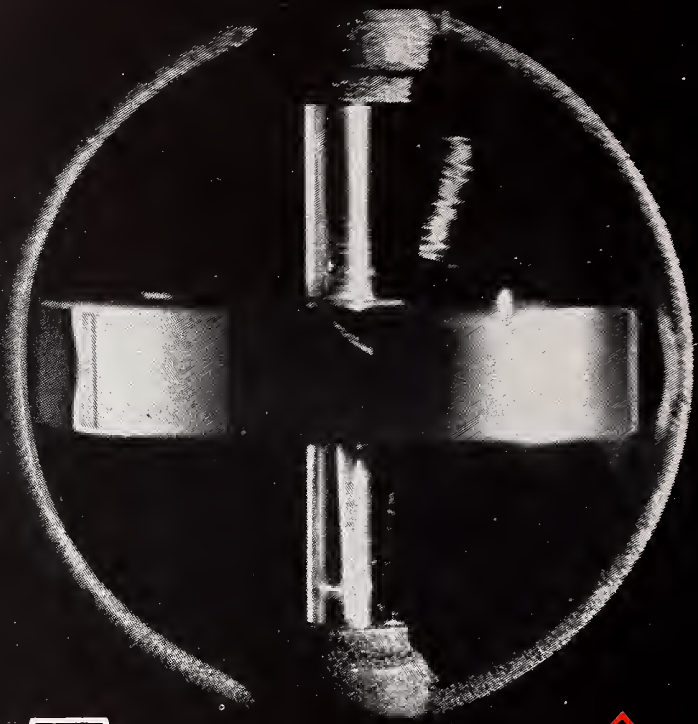

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References: 1. Feinberg, S.M., Feinberg, A.R., and Fisherman, E.W.: *J.A.M.A.* 167:58 (May 3) 1958. 2. Epstein, J.I. and Sherwood, H.: *Connecticut Med.* 22:822 (Dec.) 1958. 3. Friedlaender, S. and Friedlaender, A.S.: *Antibiotic Med. & Clin. Ther.* 5:315 (May) 1958. 4. Segal, M.S. and Duvenci, J.: *Bull. Tufts North East M. Center* 4:71 (April-June) 1958. 5. Segal, M.S.: Report to the A.M.A. Council on Drugs, *J.A.M.A.* 169:1063 (March 7) 1958. 6. Sherwood, H. and Cooke, R.A.: *J. Allergy* 28:97 (Mar.) 1958. 7. Duke, C.J. and Oviedo, R.: *Antibiotic Med. & Clin. Ther.* 5:710 (Dec.) 1958. 8. McGavack, T.H.: *Clin. Med.* (June) 1958. 9. Freyberg, R.H.; Berntsen, C.A., and Hellman, L.: *Arthritis and Rheumatism* 1:215 (June) 1958. 10. Hartung, E.F.: *J.A.M.A.* 167:973 (June 21) 1958. 11. Hartung, E.F.: *J. Florida Acad. Gen. Pract.* 8:18, 1958. 12. Zuckner, J.; Ramsey, R.H.; Caciolo, C., and Gantner, G.E.: *Ann. Rheum. Dis.* 17:398 (Dec.) 1958. 13. Appel, B.; Tye, M.J., and Leibsohn, E.: *Antibiotic Med. & Clin. Ther.* 5:716 (Dec.) 1958. 14. Kalz, F.: *Canad. M.A.J.* 79:400 (Sept.) 1958. 15. Mullins, J.F., and Wilson, C.J.: *Texas State J. Med.* 54:648 (Sept.) 1958. 16. Shelley, W.B.; Harun, J.S., and Pillsbury, D.M.: *J.A.M.A.* 167:959 (June 21) 1958. 17. DuBois, E.F.: *J.A.M.A.* 167:1590 (July 26) 1958. 18. McGavack, T.H.; Kao, K.T.; Leake, D.A.; Bauer, H.G., and Berger, H.E.: *Am. J. Med. Sc.* 236:720 (Dec.) 1958. 19. Council on Drugs: *J.A.M.A.* 169:257 (Jan. 17) 1959. 20. Rein, C.R.; Fleischmajer, R., and Rosenthal, A.R.: *J.A.M.A.* 165:1821 (Dec. 7) 1957.

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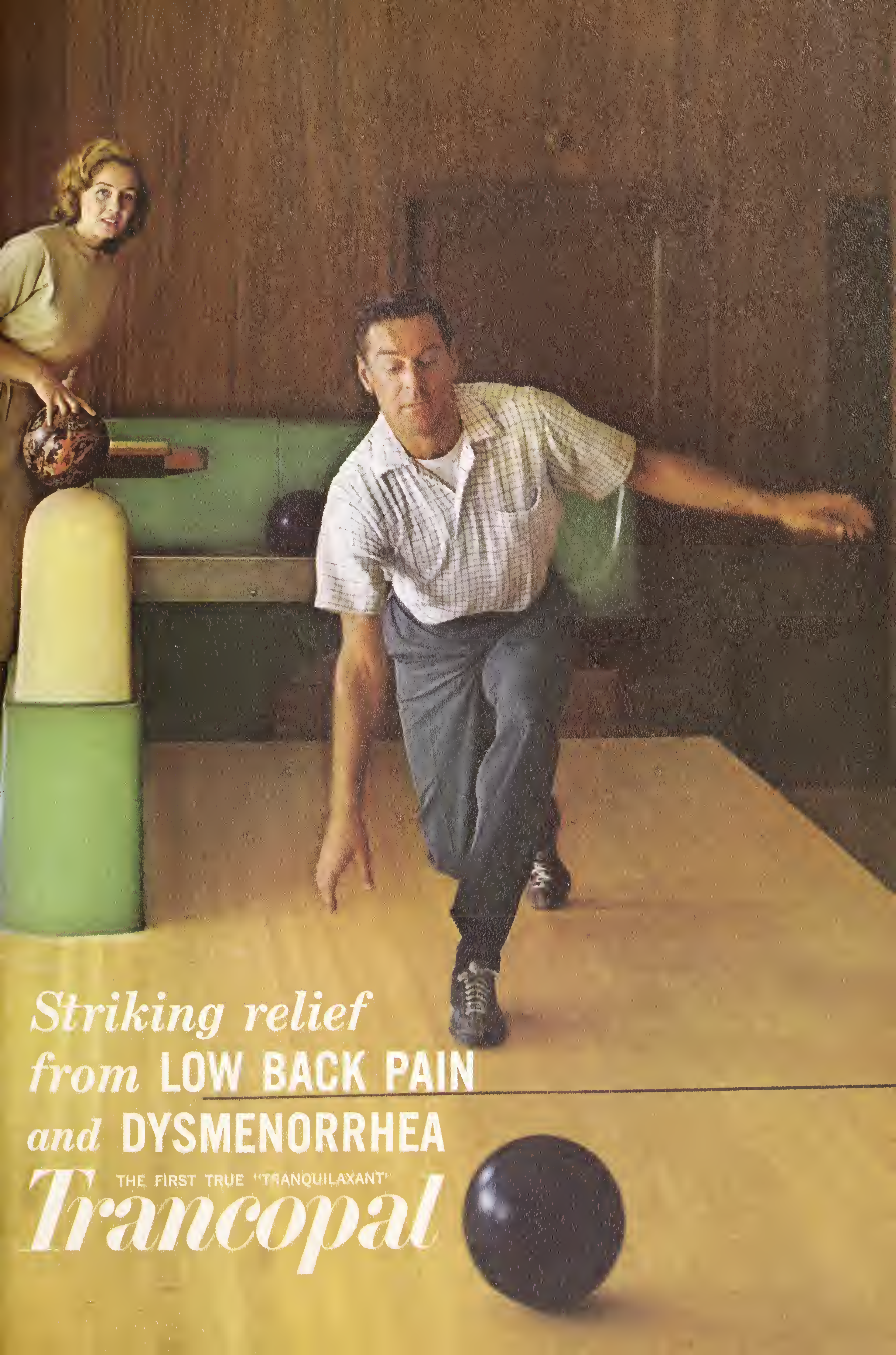
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Case Profile*

A 28-year-old married woman, a secretary in a booking agency, complained of severe and consistent pain and cramps in the abdomen during her menstrual periods. Psychologically, she described the first two days as "climbing the walls." Menarche occurred at age 13. She has a regular twenty-eight day menstrual cycle and a four day menstrual period.

Trancopal was given in a dose of 100 mg. four times a day for the first two days of the four day period. In addition to the relief of the dysmenorrhea she also noticed disappearance of a "bloated feeling" that had previously annoyed her. She has now been treated with Trancopal for one and one-half years with excellent results. Other medication, such as codeine or aspirin with codeine, had relieved the pain, but the patient had had to stay home. Because her father is a physician, many commercial preparations had been tried prior to Trancopal, but no success had been achieved.

Before taking Trancopal this patient missed one day of work every month. For the past year and a half she has not missed a day because of dysmenorrhea.

for dysmenorrhea

and premenstrual tension

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for low back pain

Case Profile*

A 42-year-old truck driver and mover injured his back while moving a piano. The pain radiated from the sacral region down to the region of the Achilles tendon on the right side. X-rays for ruptured disc revealed nothing pertinent. The day of the injury he was given Trancopal immediately after the physical examination. Although 100 to 200 mg. three times a day were prescribed, the patient on his own responsibility increased the dosage of Trancopal to 400 mg. three times a day. This dosage was continued for three days and then gradually reduced over a ten day period. During this time, the patient continued to drive his truck. The muscle spasm was completely controlled and no apparent side effects were noted.

For the past six months, the patient has continued to take Trancopal 100 to 200 mg. as needed for muscle spasm, particularly during strenuous days.

Clinical Reports on file at the Department of Medical Research, Winthrop Laboratories.

Turn page for complete listings of Indications and Dosage.

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potent MUSCLE RELAXANT

effective TRANQUILIZER

- In musculoskeletal disorders, effective in 91 per cent of patients.[1]
- In anxiety and tension states, effective in 89 per cent of patients.[1]
- Low incidence of side effects (2.3 per cent of patients). Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage. It does not affect the hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications [1-6]

Musculoskeletal:

Low back pain (lumbago, etc.)
Neck pain (torticollis)
Bursitis
Rheumatoid arthritis
Osteoarthritis
Disc syndrome
Fibrositis
Ankle sprain, tennis elbow
Myositis
Postoperative muscle spasm

Psychogenic:

Anxiety and tension states
Dysmenorrhea
Premenstrual tension
Asthma
Angina pectoris
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Dosage: Adults, 100 or 200 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

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References: 1. Collective Study, Department of Medical Research, Winthrop Laboratories. 2. Lichtman, A. L.: New developments in muscle relaxant therapy, *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 3. Lichtman, A. L.: Relief of muscle spasm with a new central muscle relaxant, chlormezanone (Trancopal), Scientific Exhibit, Meeting of the International College of Surgeons, Miami Beach, Fla., Jan. 4-7, 1959. 4. Ganz, S. E.: Clinical evaluation of a new muscle relaxant (chlormethazanone), *J. Indiana M. A.* 52:1134, July, 1959. 5. Mullin, W. G., and Epifano, Leonard: Chlormezanone, a tranquilizing agent with potent skeletal muscle relaxant properties, *Am. Pract. Digest Treat.* 10:1743, Oct., 1959. 6. Shanaphy, J. F.: Chlormezanone (Trancopal) in the treatment of dysmenorrhea: a preliminary report, *Current Therap. Res.* 1:59, Oct., 1959.

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References: 1. Cecil, R. L., et al.: J.A.M.A. 124:8 (Jan. 1) 1944. 2. Fabricant, N. D.: E.E.N.T. Monthly 37:460 (July) 1958. 3. Beckman, H.: Drugs, Their Nature, Action & Use, Saunders, Philadelphia, 1958, p. 527.

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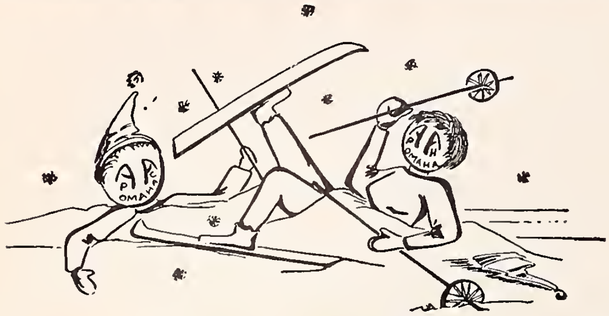

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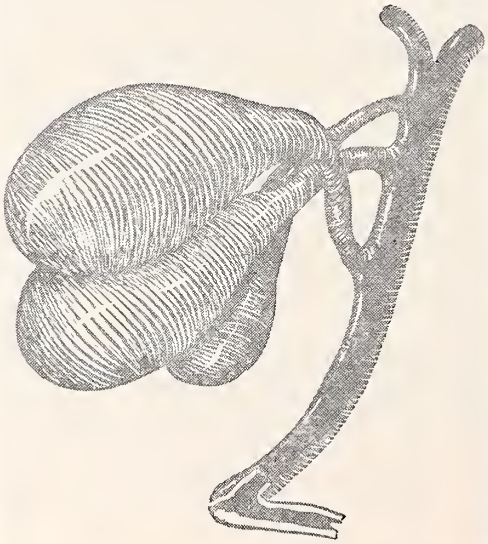
Source: Skilboe, B.: Am. J. Clin. Path. *30*:252, 1958.



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(1) Beckman, H.: Drugs: Their Nature, Action and Use, Philadelphia, W. B. Saunders Company, 1958, p. 425.
(2) Biliary Tract Diseases, M. Times *85*:1081, 1957.

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Why should I use **KANTREX**® Injection* when there are so many other antibiotics available?

Because Kantrex Injection is bactericidal to a wide variety of organisms, including many that are highly resistant to the other antibiotics[3,4,10,12,13,17,18,20,21,23,24,25,27,30,33,35,37]

—organisms such as *Staph. aureus, Staph. albus, A. aerogenes, E. coli, H. pertussis, K. pneumoniae, Neisseria* sp., *Shigella, Salmonella* and many strains of *B. proteus.*

Q *But if I use Kantrex Injection, won't that help make bacteria resistant to it also?*

Next page, please ....

Q *But if I use Kantrex Injection, won't that help make bacteria resistant to it also?*

A A very good question, but it is reassuring to note that in almost two years of clinical use of Kantrex for the treatment of infections for which it is recommended, the emergence of Kantrex-resistant bacterial populations has not been a problem.

Q *My impression is that Kantrex is just another neomycin. Isn't that so?*

A Indeed not. The only thing Kantrex and neomycin have in common is a similar antimicrobial spectrum. Otherwise, they're very different: they have different chemical structures; the toxicity of Kantrex is "much less than that of neomycin"[14]; and clinically, Kantrex Injection is practical for systemic administration routinely, while neomycin is not.

Q *You mean that Kantrex Injection doesn't have the nephrotoxicity of neomycin?*

A Precisely. It's true that when Kantrex Injection is used, urinary casts — even slight albuminuria or microscopic hematuria — may appear, especially in poorly hydrated patients, but this does not reflect any progressive damage to the kidneys. These signs promptly disappear on adequate hydration or termination of therapy.

Q *Then why do you recommend reduced dosage in patients with renal impairment?*

A Because renal impairment causes an excessive accumulation of Kantrex in the blood and tissues, when usual doses are administered. Since Kantrex Injection is excreted entirely by the kidneys, renal impairment leads to unnecessarily high and prolonged blood levels; and such excessive concentrations increase the risk of ototoxicity.

Q *Is that why we see reports of patients developing hearing loss during Kantrex Injection therapy?*

A Yes. A study of the few reported cases in which patients have suffered impaired hearing will show that in every instance they had pre-existing or concurrent renal impairment, yet received usual or excessive doses of Kantrex Injection. Dosage recommendations for Kantrex Injection emphasize that in patients with renal dysfunction, adequate serum levels can be achieved with a fraction of the dose suggested for patients with normal kidney function — with minimal risk of ototoxicity.

Q *Since urinary tract infections are often accompanied by renal impairment, does that mean I shouldn't use Kantrex Injection in such conditions?*

A Not at all. With proper precautions, Kantrex Injection is an excellent drug for the treatment of urinary tract infections, especially those due to *Proteus, A. aerogenes* and *E. coli*, even when renal impairment is present.

Q *What are the "proper precautions" in a patient with impaired renal function?*

A The package literature covers them in detail. First, the daily dose should be reduced in such a patient. Then, if he is going to receive Kantrex Injection for 7 days or more, a pre-treatment audiogram should be done, and it should be repeated at appropriate intervals during therapy. If tinnitus or subjective hearing loss develops, or if followup audiograms show significant loss of high frequency response, Kantrex therapy should be discontinued. However, therapy for 7 days or more is seldom required because the clinical response to Kantrex Injection is so rapid.

---

* Kanamycin sulfate injection (Bristol)

Q *Why do you put so much emphasis on Kantrex's "rapid action"? Every antibiotic I've heard about is supposed to be "rapid acting."*

A There is such an abundance of clinical evidence about "rapid acting" that it takes Kantrex Injection out of the "supposed-to" class.[1,2,3,7,8,9,11,15,16,19,21,22,26,29,32,33] Remember, the effectiveness of Kantrex Injection therapy can usually be appraised in 24 to 36 hours. That's definite evidence of rapid action. In fact, one group of investigators reported that "the rapidity with which bacteria are killed by this agent is reflected by the promptness of the clinical response."[29]

Q *Does Kantrex Injection cause blood dyscrasias?*

A In extensive clinical and toxicity studies by numerous investigators, as well as almost two years of general use, not a single instance of such toxicity has been reported.

Q *Can I administer Kantrex Injection in any other way than by the intramuscular route?*

A Yes. While it's usually given intramuscularly, other routes are practicable: intravenous, intraperitoneal, by aerosol, and as an irrigating solution. Complete instructions are included in the package insert.

Q *So you think I ought to use Kantrex Injection as my first choice antibiotic in staph and gram-negative infections?*

A Yes – because all evidence to date indicates that it is bactericidal against a wide range of organisms...rapid acting...does not encourage development of bacterial resistance...is well tolerated in specified dosage...and has not caused any blood dyscrasias.

KANTREX CAPSULES

for local gastrointestinal therapy...
not for systemic infections

Q *Why can't I use Kantrex Capsules for systemic medication?*

A Because there is only negligible absorption of Kantrex from the gastrointestinal tract.[3,5,6,8,28,34] Thus, capsules cannot provide effective blood levels.

Q *Then what are Kantrex Capsules used for?*

A Preoperative bowel sterilization, and local treatment of intestinal infections due to kanamycin-sensitive organisms.

Q *I've been using neomycin for preoperative bowel sterilization. Why should I switch to Kantrex Capsules?*

A Because Kantrex has been rated as "superior to neomycin" for this purpose.[6] It provides rapid and satisfactory control of coliforms, clostridia, staphylococci and streptococci; yeasts do not proliferate; stool concentrations of the drug are exceptionally high; and nausea, vomiting or intestinal irritation have not been observed.[5,6]

Q *What advantages do Kantrex Capsules offer me in the treatment of intestinal infections?*

A A high degree of effectiveness against most of the pathogens responsible for such infections: *Salmonella, Shigella, Staph. aureus, E. coli* and *Endamoeba histolytica*. Moreover, their use has been "remarkably free of any side effects."[31]

KANTREX

INJECTION KANAMYCIN SULFATE INJECTION

INDICATIONS

Infections due to kanamycin-sensitive organisms, particularly staph or "gram-negatives"; genito-urinary infections; skin, soft tissue and post-surgical infections; respiratory tract infections; septicemia and bacteremia; osteomyelitis and periostitis.

DOSAGE: INTRAMUSCULAR ROUTE

Recommended daily dose is 15 mg. per kg. of body weight, in 2 to 4 divided doses.

For intramuscular administration, Kantrex Injection should be injected deeply into the upper outer quadrant of the gluteal muscle.

TOXICITY

When the recommended precautions are followed, the incidence of toxic reactions to Kantrex is low. In well hydrated patients under 45 years of age with normal kidney function, receiving a total dose of 20 Gm. or less of Kantrex, the risk of ototoxic reactions is negligible.

In patients with renal disease and impaired renal function, the daily dose of Kantrex should be reduced in proportion to the degree of impairment to avoid accumulation of the drug in serum and tissues, thus minimizing the possibility of ototoxicity. In such patients, if therapy is expected to last 7 days or more, audiograms should be obtained prior to and during treatment. Kantrex therapy should be stopped if tinnitus or subjective hearing loss develops, or if audiograms show significant loss of high frequency response.

OTHER ROUTES OF ADMINISTRATION

Kantrex should be used by intravenous infusion only when the intramuscular route is impracticable. Kantrex can also be employed for intraperitoneal use, aerosol treatment, and as an irrigating solution. See package insert for directions.

PRECAUTIONS

Use of antibiotics may occasionally result in overgrowth of non-sensitive organisms. If superinfection appears during therapy, appropriate measures should be taken.

SUPPLY

Available in rubber-capped vials as a ready-to-use sterile aqueous solution in two concentrations (stable at room temperature indefinitely):

KANTREX Injectian, 0.5 Gm. kanamycin (as sulfate) in 2 ml. volume.
KANTREX Injectian, 1.0 Gm. konomycin (as sulfate) in 3 ml. volume.

CAPSULES (for local gastrointestinal therapy; not for systemic medication)

INDICATIONS AND DOSAGE

For preoperative bowel sterilization: 1.0 Gm. (2 capsules) every hour for 4 hours, followed by 1.0 Gm. (2 capsules) every 6 hours for 36 to 72 hours.

For intestinal infections: Adults: 3.0 to 4.0 Gm. (6 to 8 capsules) per day in divided doses for 5 to 7 days. Infants and children: 50 mg. per kg. per day in 4 to 6 divided doses for 5 to 7 days.

PRECAUTION

Preoperative use of Kantrex Capsules is contraindicated in the presence of intestinal obstruction. Although only negligible amounts of Kantrex are absorbed through intact intestinal mucosa, the possibility of increased absorption from ulcerated or denuded areas should be considered.

SUPPLY

Kantrex Capsules, 0.5 Gm. kanamycin (as sulfate), bottles of 20 and 100.

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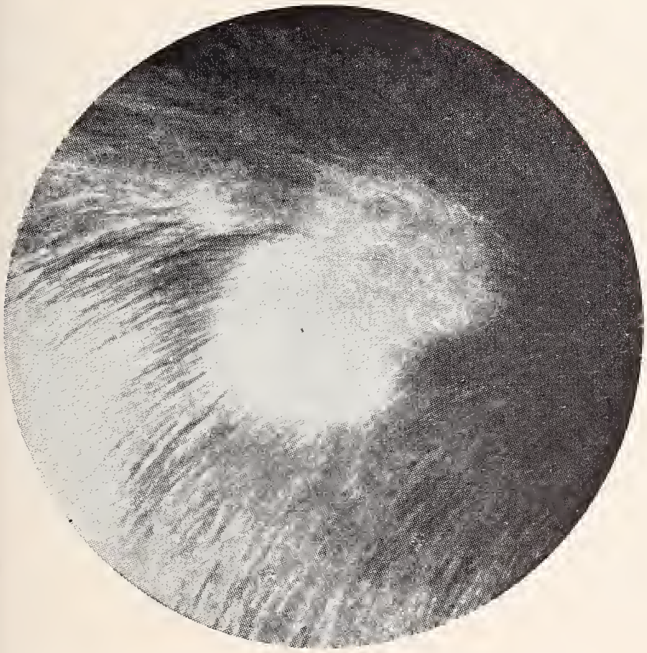
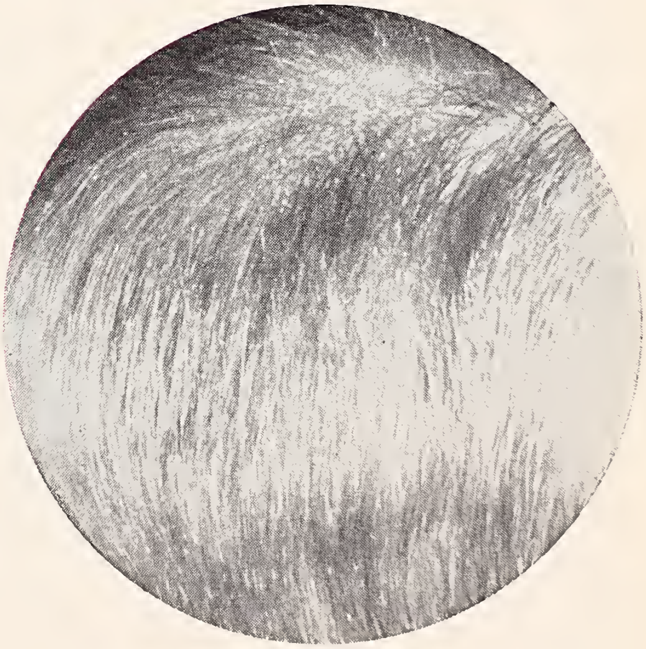
In tinea capitis



Before FULVICIN: Tinea capitis *(Microsporum audouini)* in a 7-year-old boy.



After FULVICIN: Normal, new hair growth after 6 weeks of oral therapy.

Photos courtesy of M. M. Nierman, M.D., Calumet City, Ill.

Lesions clear, cultures become negative in

tinea corporis: 4 to 5 weeks[1]
tinea cruris: 4 to 6 weeks[1]
onychomycosis: 4 to 6 months[1]
tinea pedis: 6 to 8 weeks[1]

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For complete information about dosage, indications and precautions consult Schering Statement of Directions.

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1. Robinson, H. M., Jr., *et al.*: Griseofulvin, Clinical and Experimental Studies, A.M.A. Arch. Dermat., in press.

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25 to 50 pounds	1 teaspoonful	
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In more severe infections, these dosages may be doubled.

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ARIZONA MEDICINE
Journal of Arizona Medical Association

VOL. 16, NO. 12 DECEMBER, 1959

Original Articles

THE TREATMENT OF ACUTE ASTHMA*

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Section of Medicine
*Mayo Clinic and Mayo Foundation***
Rochester, Minn.

PERHAPS you have not yet suspected it, but physicians commonly will tell the difficult asthmatic patient, "You must go to Arizona." Unfortunately, the physician also may make broad implications that such a trip will prove to be a panacea for asthma. This regrettable situation makes it imperative that Arizona physicians have clearly in mind an adequate program for the management of acute asthma.

Physicians hold many divergent opinions as to the proper long-range management of asthma. These remarks, therefore, will be limited to the treatment of the acutely ill asthmatic patient, a field in which less difference of opinion exists and in which immediate information is of great importance.

Bronchodilating Drugs

The first objective in the management of asthma is symptomatic relief of the acute asthmatic attack. Therefore, the use of bronchodilating drugs is an early therapeutic consideration. The most effective of these drugs is epinephrine hydrochloride. This drug is best given in an aqueous 1:1000 solution. It should be administered early and in adequate amounts to afford prompt symptomatic relief. Usually, the dose ranges from 0.25 to 0.5 ml. as a single injection, or 0.25 ml. can be given at intervals as brief as 20 minutes for the patient seriously ill with asthma. Timid, delayed and inadequate use of epinephrine probably has been the basis for more disastrous results in the treatment of asthma than has its excessive use. Epinephrine should be given, of course, in smaller amounts when such are effective and in those patients having the relative contraindications of old age, vascular disease and hypertension. The early administration of epinephrine prevents an attack of asthma from becoming advanced, with more extensive medication becoming necessary for its control. It is usually preferable to inject epinephrine in an aqueous solution rather than in forms designed for delayed absorption; while the latter vehicles prolong the effect of this drug, they also delay its absorption at times when it may be urgently needed.

In selected asthmatic patients, my colleagues and I have thought it desirable to provide instruction in the self-administration of epinephrine. Patients who are able to do this are much less anxious concerning an attack of asthma than are patients who must depend on the availability of the services of a physician, nurse or spouse for an injection to provide symptomatic relief.

Bronchodilators are also available in the form of nebulized epinephrine hydrochloride or closely related derivatives of epinephrine, such as isoproterenol. The latter substance has fewer cardiovascular side effects than has epinephrine, while retaining and enhancing its asthma-relieving properties. Epinephrine hydrochloride and isoproterenol given by nebulization afford more prompt relief for the acute asthmatic attack than do ingested medicaments. Also, the use of a nebulized drug is easier than is the administration of those requiring injection. Isoproterenol is likewise available in the form of a powder for insufflation into the bronchial tree, and it can be given in a less effective tablet form for sublingual use. The effect of epinephrine and of isoproterenol by nebulization is usually prompt but transitory. The subcutaneous or intravenous injection of isoproterenol is likely to be associated with excessive cardiovascular symptoms, making it less useful by this means of administration.

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*Read at the meeting of the Arizona Medical Association, Chandler, Ariz., April 28 to May 2, 1959.

**The Mayo Foundation, Rochester, Minn., is a part of the Graduate School of the University of Minnesota.

An important group of bronchodilating drugs is that of ephedrine and similar drugs. These induce an epinephrine-like effect extending for four to six hours. Indeed, the effectiveness of ephedrine likely exists because of its capacity to slow the rate of enzymatic destruction of endogenous epinephrine. My colleagues and I usually administer ephedrine sulfate in a dose of ⅜ of a grain given orally at four-hour intervals. Unfortunately, many patients react adversely to ephedrine by the development of cerebral excitation or cardiovascular symptoms, which makes the use of the drug of less value. Also, elderly men who have urinary obstruction from prostatic disease may experience acute urinary retention following the use of ephedrine. When such adverse symptoms arise, one may consider the use of ephredine-like drugs, such as methoxyphenamine (orthoxine) hydrochloride or phenylpropanolamine (propadrine) hydrochloride. The effect of these agents, however, appears to be somewhat less than is that of ephedrine.

The xanthine derivatives are an extremely important group of bronchodilating drugs. Of these, aminophylline is the most efficacious. It is most efficient when administered intravenously, being much less effective when given either orally or by rectal administration. For the seriously ill asthmatic patient, we commonly administer 250 mg. of the drug in each liter of those intravenous fluids used initially to hydrate the patient. For a critically ill patient, a more concentrated solution of aminophylline at times may be injected intravenously in order to achieve an immediate bronchodilating effect. However, if the contents of a 10-ml. ampule (250 mg.) of aminophylline are injected directly into a vein or into the tube of a freely running venoclysis set, this should be done very slowly in order to avert cardiovascular effects. For the patient having mild nocturnal attacks of asthma, either suppositories or small retention enemas containing 500 mg. of aminophylline may offer effective anti-asthmatic therapy. However, rectal or perianal irritation develops in some patients from aminophylline used in this manner. In such cases of local distress, suppositories containing other medicaments, such as theophylline methyl glucamine (glucophylline), may be tried.

Hydration

The problem of hydrating seriously ill asthmatic patients is of considerable importance. These patients have eaten poorly, have been drinking less liquid than usual and have perspired freely. They ordinarily enter the hospital in a state of dehydration. On admission to the hospital, such patients usually should be given fluids intravenously. We often administer two to three liters of fluids during the first day in the hospital, the main portion being given in the form of a 5 per cent solution of dextrose in water. The matter of adding sodium to these fluids must be judged in the light of steroid administration and of the possibility of actual or potential adrenal disease. The dextrose provides nourishment and also replenishes glycogen, which has been depleted from the liver by repeated injections of epinephrine. We continue with the intravenous administration of fluids, giving one to two liters daily until hydration is achieved, as evidenced by an increasing urinary output and thinning of the inspissated bronchial secretions. If extensive hydration is required, it is best to be certain that no electrolytic imbalance occurs; this is especially true when steroid therapy is being used simultaneously. In addition to the intravenous use of fluids, we encourage patients to drink generous amounts of water, trying to achieve an objective of a glass of water each waking hour until hydration has been effected. As the state of hydration improves, the intravenous use of fluids can be decreased and then discontinued.

A word of caution is in order concerning those patients in whom the question of potential or actual congestive heart failure exists. Such patients should be hydrated less enthusiastically and observed carefully for any evidences of pulmonary edema.

Expectorants

One of the most frequently omitted drugs in the therapeutic regimen for the asthmatic patient is an appropriate expectorant to thin the bronchial secretions. It should be noted that the value of an expectorant is limited until hydration has been effected. With hydration and thinning of the bronchial secretions, the irritative coughing may be reduced, thereby greatly enhancing healing of the inflamed bronchial mucosa.

To my knowledge, the most effective expectorant is potassium iodide. One should administer this drug as long as bronchial secretions are tenacious and difficult to raise. Iodides generally are the bulwark of medication used by the asthmatic patient. These usually are tolerated better after meals and when liberally diluted with water. If digestive distress proves troublesome, the use of enteric-coated tablets of potassium iodide may afford some respite. Unfortunately, an intolerance to iodides develops in some patients, with swelling of the salivary glands or an acnelike eruption that necessitates use of less effective expectorants, such as ammonium chloride, as a substitute.

Detergent solutions given by nebulization occasionally are used to aid in thinning and raising the bronchial secretions. While such solutions are occasionally helpful, their use is of limited value because they are in themselves irritating.

Sedation

Asthmatic patients often are emotionally disturbed and usually are profoundly exhausted. Therefore, the judicious use of sedatives is often helpful in bringing relief to the acutely ill asthmatic patient.

As one selects a sedative for use in the asthmatic patient, it is important to avoid drugs that depress the respiratory center. Also, it should be remembered that asthmatic patients often tolerate sedatives poorly. For example, asthmatic patients frequently are stimulated rather than sedated by barbiturates. Those sedatives which are more useful include chloral hydrate and such ataractics as meprobamate, chlorpromazine or promazine.

The practice of giving opiates to the asthmatic patient is to be condemned. These drugs depress the respiratory center at a time when it is already burdened with the severe stress of asthma, and their use is too often a prelude to respiratory failure. At no time should morphine, codeine, meperidine (demerol), dihydromorphinone (dilaudid) or similar opiates be given to a patient in the primary treatment of asthma. During the postoperative care of asthmatic patients, one may use demerol for the relief of pain, because this drug suppresses the respiratory center less than do other opiates. Antihistaminic agents are relatively less important in the management of asthma, although they are at times helpful for their sedative effect.

Cortisone-like Drugs and Corticotropin

The introduction of cortisone-like drugs and corticotropin has given the physician powerful weapons in the management of asthma. While these drugs are useful, their administration should be governed by a rigid framework of qualifying circumstances. These agents are but one facet in the management of the seriously ill asthmatic patient. While their administration usually will bring about rapid and effective control of asthma, such control unfortunately lasts only while the drugs are being employed and for a brief subsequent period. Asthma then will recur unless other measures to control its causes and complications have been successful. The average duration of benefit to the asthmatic patient after the use of such drugs is discontinued is about three weeks; indeed, half the patients are having trouble after one week.

The principal disadvantage of the cortisone-like drugs is that they suppress the activity of the adrenal cortex. This is the consequence of suppression of the anterior pituitary gland, which then fails to elaborate a hormone to stimulate the adrenal cortex. Inasmuch as asthma is a disease often associated with periodic severe stress, and inasmuch as the intact anterior pituitary-adrenal cortical mechanism is a device to splint the body in the event of stress, it is evident that atrophy of the adrenal cortex is a serious problem for the asthmatic patient. Of course, the usual relative contraindications to steroid therapy are as valid in asthmatics as they are in nonasthmatic patients. These include such conditions as peptic ulcers, pyogenic infections, emotional illnesses and tuberculosis. It is important, therefore, that a patient's physical condition be adequately studied and that the indications be clear before steroid hormones are employed in the management of asthma.

Definite indications exist for the use of cortisone-like drugs in asthma. These include first the critically ill patient who is in such a desperate state that there is insufficient time to assess the influence of more conservative remedies on his asthma. Next, one may use these hormones for those seriously ill patients who are failing to respond satisfactorily to other measures. A third indication concerns that asthmatic patient undergoing severe stress who has, in preceding weeks, received steroid drugs and whom we might consider as potentially having adrenal cortical insufficiency. In such instances, treatment is, at least in part, a crutch to bolster flagging adrenal cortical function. One occasionally encounters a patient in whom great urgency exists in the necessity to bring asthma under control, such as in the pre-operative preparation of a patient suspected of having a malignant tumor; under such circumstances, one may employ steroid drugs, realizing that their use must be continued through the major stress of the operative procedures to follow. There are certain surgical procedures in which the control of cough and asthma is especially important, as in the repair of large postoperative ventral hernias; one might consider the use of steroid drugs as being indicated for such conditions.

With respect to the program of steroid medication, my colleagues and I prefer the use of periodic, discrete courses in the management of asthma. These courses usually extend less than three weeks. The latter days of a course are utilized in decreasing the dose of the steroid being administered. We do not consider that steroids should be used in place of other more conservative types of treatment, but rather as a supplement to other forms of therapy. When longer courses are used, one often encounters great difficulty in discontinuing the use of steroid drugs. In general, the longer the period of therapy, the more prolonged should be the process of tapering off as administration of the drugs is discontinued. If these agents have been used for months or years, several weeks are necessary for the gradual reduction in doses, perhaps with decrements no greater than 10 per cent weekly, before their use ultimately is discontinued. In our experience, the use of periodic courses of corticotropin (ACTH) with the hope these will stimulate the patient's own adrenal function has proved of little value as an adjunct in discontinuing a prolonged course of steroid therapy. Whereas problems with electrolytic disturbances were once a significant part of treatment with cortisone, we find these to be less frequent with shorter courses of the more recently available steroid drugs.

Specific Steroid Drugs

My colleagues and I infrequently use cortisone in the management of asthma. Its interest is primarily historical. The only occasion for which we still employ it is the preparation of a surgical patient who has received large amounts of steroid drugs. We then give intramuscular injections of slowly absorbed cortisone to splint the patient through the ensuing period of operative stress.

Hydrocortisone also is used much less frequently than it was formerly, although we still employ it primarily because of its solubility, which enables one to administer the drug intravenously and thereby start quickly a program of steroid therapy.

Prednisone and prednisolone can be considered together because of the similarity in their use. Prednisolone is perhaps slightly more potent than is prednisone, yet the doses generally employed in implementing therapy are similar. We usually give these medicaments orally at six-hour intervals in divided doses. The initial dose is 10 mg. every six hours. This dose is gradually halved over perhaps three days as a therapeutic response is being achieved. Toward the end of such a course of treatment, the dose is tapered off and then use is discontinued.

More recently, we have given triamcinolone or methyl prednisolone in a similar course of therapy; however, the doses are 80 per cent of those employed with prednisolone or prednisone. The latter drugs actually may not only be free of a tendency to cause retention of sodium, but actually may bring about a slight loss of sodium.

A still more potent steroid drug now is available in the form of dexamethasone. A dose of 0.75 mg. of this agent is the equivalent of 4 mg. of methyl prednisolone or triamcinolone, and it is the equivalent of 5 mg. of prednisolone or prednisone.

Our use of corticotropin has decreased in recent years. One reason for this concerns the necessity for its injection. Although the use of gels as a vehicle has reduced the number of injections that are needed, the necessity for injection still persists. Perhaps a more pressing reason is that corticotropin, to be effective, must stimulate an adrenal cortex that is capable of responding. Therefore, if steroid therapy is urgently needed, one is safer in relying on steroids administered directly rather than to rely on their indirect release by corticotropin. When we do employ corticotropin in the treatment of asthma, we use it in the form of a gel, administering doses every 12 hours, usually starting with doses of 40 units and reducing them to 20 units as a therapeutic effect is achieved.

Less effective but still a useful adjunct in steroid therapy is the topical use of nebulized prednisolone. This form of treatment circumvents the systemic effects of steroid drugs and exerts a local effect on the bronchial mucosa. In this technic, one may use a solution containing 10 mg. of prednisolone per milliliter; 2 to 3 ml. of this solution, mixed with a like amount of a 0.5 per cent solution of isoproterenol, is nebulized daily, perhaps in six sessions.

Gas-Inhalation Therapy

The inhalation of gases in the treatment of asthmatic patients is employed less today than it was a decade ago. However, when cyanosis is associated with asthma, the use of oxygen or of a mixture of helium and oxygen still occupies a place in an anti-asthmatic regimen. We prefer the use of oxygen by a BLB mask to its administration by a tent or a nasal catheter. The variable need for oxygen by the patient who has uncomplicated asthma makes the use of a mask more readily adaptable to the particular situation. When oxygen is employed by mask, a volume of six to nine liters per minute usually suffices; this amount should allow the rebreathing bag on a BLB mask to be not quite empty at the height of inspiration. A mixture of 80 per cent helium and 20 per cent oxygen, given either directly from a tank in that proportion or further diluted with equal parts of oxygen, is used by many physicians in the treatment of asthma. The patient receiving helium has a high-pitched, squeaky voice that may alarm him if he has not been forewarned about this.

Particularly to be avoided is the administration of oxygen in generous quantities to patients who have advanced pulmonary emphysema, because such patients may be adversely affected by oxygen therapy. With severe pulmonary emphysema, a certain degree of oxygen want affords an essential continuing stimulus to the flagging respiratory center. If an abundance of oxygen suddenly is made available, respiratory failure and loss of consciousness often develop. When oxygen must be administered to the emphysematous patient, it should be used in restricted quantities, and the patient should be carefully observed for confusion or for evidences of respiratory failure.

Many varying opinions can be found concerning the desirability of positive-pressure breathing devices, such as the Bennett valve and the "Mines Safety Ventilator." Patients generally do not prefer the administration of oxygen by means of positive-pressure mechanisms. The major usefulness of such devices is in patients having an element of pulmonary edema or perhaps when they are used intermittently in patients who have emphysema.

My colleagues and I commonly give carbon dioxide by inhalation for asthmatic patients following upper abdominal operations. Such operations make deep breathing painful and are likely to be followed up by atelectasis. Inhalations of 95 per cent oxygen and 5 per cent carbon dioxide at hourly intervals will stimulate deep breathing and thereby reduce the possibility of atelectasis.

Environmental Control

An important aspect in the management of asthma concerns control of the patient's environment. Hospitalization should be considered for the seriously ill asthmatic patient, especially one who is responding poorly to measures introduced for care in the home. Hospitalization immediately removes the patient from allergens encountered in his home. When time permits, dust-proof covers should be applied to the mattress and pillows in the hospital room prior to the patient's arrival. Kapok should not be used as a substitute for feathers because of the frequency with which patients grow allergic to it. Foam-rubber pillows and mattresses are satisfactory for use by most patients. Sweeping should be avoided in the room, as this resuspends dust in the air. Floors should be cleaned with a damp cloth. The better control of humidity and temperature possible within the hospital greatly favors the healing of bronchitis, which all asthmatic patients have to a greater or lesser degree. During seasons when pollens to which a patient may be allergic are in the air, a pollen filter should be placed in the bedroom window to permit only pollen-free air to enter the room. Doors, transoms and other means by which pollen-laden air might enter a room obviously should be kept closed.

It is desirable to place the acutely ill asthmatic patient in a private room. In a ward, it is difficult to control dust, feathers, cosmetic preparations, various offending respiratory irritants and guests of other patients. Asthmatic patients often have their greatest trouble at night, and this engenders in others an apprehension that is not lost on the asthmatic patient. Hospitalization removes the patient from the constant overt anxiety of solicitous relatives.

Many measures that are necessary in the adequate treatment of asthma are more readily available in the hospital than in the home. This includes the inhalation of therapeutic gases, the parenteral use of fluids and the early administration of injected medicaments. However, if hospitalization is not available, much may be accomplished with modifications of a home routine to adapt the care to the needs of the asthmatic patient.

Objectionable Procedures

Certain procedures should be mentioned as objectionable. As already discussed, the use of opiates should be avoided because of their suppressive effect on the respiratory center. Likewise, one should avoid therapy with burning stramonium powder, which, while affording a measure of temporary relief, aggravates the bronchitis and perpetuates asthma. One should avoid preparations containing arsenic because of the hazards of arsenical intoxication. Asthmatic patients should not smoke, because this aggravates bronchitis. Sedation should be used sparingly. Many remedies used in treating asthma include a small amount of a sedative, and the accumulative effect of many sedative agents should be avoided. Asthmatic patients should not be encouraged to cough hard. Many asthmatic patients believe that bronchial secretions are noxious and must be expectorated. Such patients cough repeatedly and unnecessarily in attempts to raise bronchial secretions. By mechanical irritation, these patients perpetuate the problem of bronchitis. As the secretions become thinner, one should urge patients to suppress excessive coughing. Rest for the inflamed bronchial mucosa is a prerequisite for healing.

Bronchitis

As indicated previously, each patient with asthma has some degree of bronchitis. If a patient has purulent sputum or other evidences of bacterial infection as suggested by fever or by the thoracic roentgenographic findings, the use of antibiotic drugs should be seriously considered. However, administration of antibiotics should be avoided in the absence of a specific indication. Results of cultures of sputum, with determination of the sensitivity of the organisms involved to various antibiotics, should determine the selection of a proper antibiotic agent. In those patients receiving prolonged antibiotic treatment, the sensitivity studies should be repeated occasionally. The flora of the bronchial tree will change following antibiotic therapy in a manner analogous to the changes induced in the flora of the gastrointestinal tract. In addition to the oral and parenteral administration of antibiotic drugs, one may nebulize antibiotics, particularly if infection resolves slowly or if an element of bronchiectasis is present.

With subsidence of the acute phase of asthma, one has much more latitude in evaluating the basic causative factors that have brought about the asthma. An otorhinolaryngologist can determine if chronic disease exists in the paranasal sinuses; if such disease is present, surgical measures for more adequate drainage might be considered. Likewise, one should consider an allergy survey at this time. Such studies should be deferred to this point because the patient's illness necessitates the use of drugs that may interfere with cutaneous reactivity. Emotional factors that have been important should be given more adequate consideration. The question of bronchoscopy might be considered.

Conclusions

The asthmatic patient has an illness that is greater than its allergic aspects alone. These patients often present problems involving many systems. It is unusual for a patient to have asthma in the absence of any other pathologic changes. The use of potent weapons in the management of asthma presupposes an accurate appraisal of the entire patient, not merely his respiratory symptoms and especially not merely the immunologic aspects of these symptoms. Only if the entire patient, his other diseases, his emotional problems, and the ultimate effects of the treatment being given are reviewed can the best care for asthmatic patients be afforded.

GOLD IN THE TREATMENT OF RHEUMATOID ARTHRITIS

L. Maxwell Lockie, M.D.
Buffalo, N. Y.

SINCE October 1932, there have been 3,120 patients with a positive diagnosis of rheumatoid arthritis who have been studied and followed for varying periods of time in our practice. Gold salts have been a valuable agent in treatment in this group since 1933, although in the early years it was not used in the mild cases unless response to other treatment was considered inadequate. However, since 1940, it has been given to all patients with reversible rheumatoid arthritis who were in good health otherwise. Individually, the duration of gold therapy varied from one injection to continuous use over a 20-year period and the total amount from 10 mg. to 11,890 mg. administered intramuscularly.

Koch, in 1890, reported the results of his experiments that demonstrated the inhibition of the growth of tubercule bacilli when they were exposed in a gas of gold cyanide. It was one of the harbingers of chemotherapy and, in 1913, Feldt reported the bacteriocidal properties of certain preparations of gold which contained a sulfhydryl group. In 1927, he demonstrated the effectiveness of gold thioglucose against experimentally produced streptococcic and spirochetal infections in mice. The same year, Lande and Pick independently discussed the effect of gold salt therapy in patients with rheumatoid arthritis, and in 1928, Forestier began to use it intensively, reasoning that if gold salts were of value in other chronic diseases, such as tuberculosis, they might be effective in rheumatoid arthritis. The first of his several reports appeared in 1929 and provided the impetus for the use of gold salts generally.

The criteria for the study included a history, complete physical examination, pertinent laboratory data, and x-ray examination. An individual program was explained in detail to each patient. It consisted of weekly intramuscular injections of gold salts, a minimum initial period of three weeks' complete bed rest, physical therapy (including instructions in exercises), psychotherapy, use of analgesics, sedation, and orthopedic aids, and, when indicated, steroid therapy. Those making up the "control" group were given the same over-all instructions, with the single exception that gold salts were not administered. A few patients received small amounts of Streptococcus vaccine in its place.

Only patients who had been observed weekly for a minimum of three months were included in this study. There were records of 507 patients who received gold salts and 566 control patients. It was decided, further, for purposes of evaluation, to divide the gold-treated into groups of those who had received a total of more or less than 300 mg. of gold salts. There were 369 patients who had been given more than this amount and 138 who had received less. This latter group consisted of patients who had manifested sensitivity to gold, who were started on gold therapy recently, or who had discontinued this treatment by their own choice.

The gold salt was given intramuscularly at

TABLE I

Response to Therapy of Patients with Mild, Moderate, and Severe Rheumatoid Arthritis, with Comparison of Group Receiving Minimum of 300 mg. of Gold Salts and Control Group.

Degree of Rheumatoid Arthritis

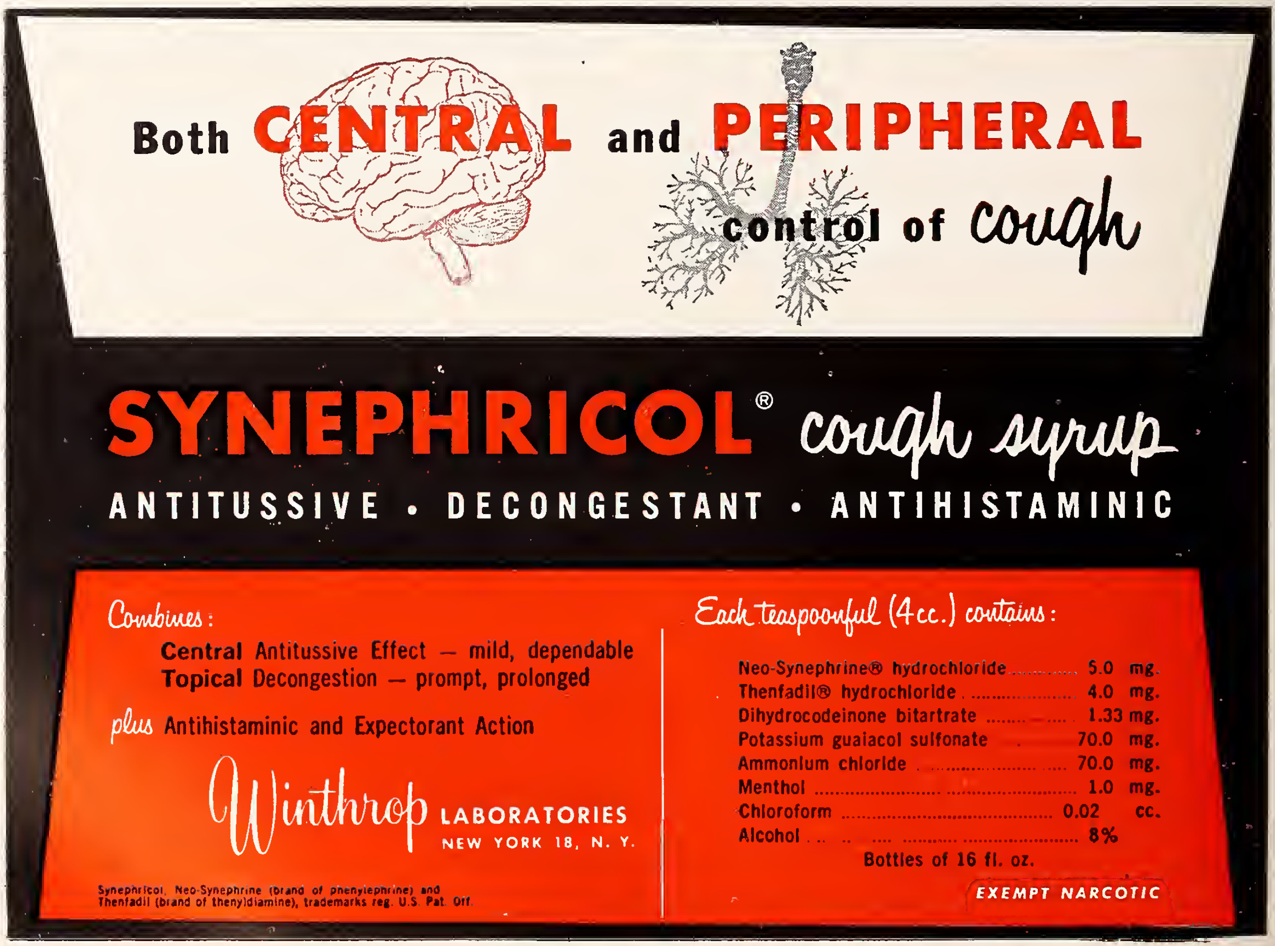
	Mild						Moderate						Severe					
	Gold Treated			Controls			Gold Treated			Controls			Gold Treated			Controls		
Response	No.	Per Cent		No.	Per Cent		No.	Per Cent		No.	Per Cent		No.	Per Cent		No.	Per Cent	
Excellent	8	14	56	6	7	34	19	13	68	10	4	44	4	2	49	4	2	35
Major	23	42		23	27		79	55		93	40		80	47		83	33	
Minor	21	38		47	55		40	28		98	42		69	40		125	55	
None	3	5		9	11		4	3		30	13		19	11		38	15	
Total	55			85			142			231			172			250		

weekly intervals, beginning with a dose of 10 mg., then 20 mg., and then 40 mg. weekly. If no signs of sensitivity appeared, treatment was continued until 500 mg. had been given. At this point, the weekly dosage was determined on the basis of the patient's clinical status. Those with moderate or severe arthritis usually required weekly injections of 40 mg. until 800 mg. had been administered, then 20 mg. for four weeks, 10 mg. weekly for four weeks, 10 mg. at increasing intervals, and finally 10 mg. once every four weeks for years. Those with mild symptoms were not given as much gold salts after the first 500 mg., since the dosage was cut more rapidly to be leveled eventually at 10 mg. monthly for years. It should be stressed that, during the period of dosage of 10 mg. per month, should exacerbation occur, the dose of gold salts given should be increased and the intervals between injections shortened in order to control the symptoms.

The gold was injected into the deltoid muscle, with use of a 24-gauge, ¾ inch needle, which produced no inflammatory reaction, was well tolerated, and was easier to administer than into the gluteal region. At each visit, prior to injection, the patient was questioned concerning signs of sensitivity, especially glossitis or dermatitis. Complete blood-cell count and urinalysis were done every three or four weeks.

Summary

Since October 1932, 3,120 patients with a positive diagnosis of rheumatoid arthritis have been studied. Since 1940, gold salts have been given to all patients with reversible rheumatoid arthritis who were in good health otherwise. The gold salt was given intramuscularly at weekly intervals, the initial dose being 10 mg., then 20 mg., and then 40 mg. weekly. If no signs of sensitivity appeared, treatment was continued until a minimum of 500 mg. had been given. Use of gold salts affords patients 20 per cent better chance of complete recovery or of major improvement. Severe reaction to gold occurs in a very small percentage of patients.



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EXEMPT NARCOTIC

EL ORO EN EL TRATAMIENTO DE LA ARTRITIS REUMATOIDE

By Maxwell Lockie, M.D.
Buffalo, N. Y.

En nuestra práctica, desde octubre de 1932 hemos estudiado y seguido por un período variado de tiempo, 3,210 enfermos con diagnóstico positivo de artritis reumatoide. Desde 1933 las sales de oro han sido un tratamiento de valor en este grupo de enfermos, auque en los primeros años no se usaron en los casos medianos más que cuando no había respuesta a otros tratamientos. Sin embargo, desde 1940 la hemos administrado a todos aquellos enfermos con artritis reumatoide reversible que por otra parte estaban en buenas condiciones de salud.

La duración de la terapia con el oro en cada enfermo, varió desde una inyección hasta una administración sostenida durante 20 años con un total de 10 miligramos a 11,890 miligramos, administrados por vía intramuscular.

Koch en 1890 reportó los resultados de sus experiencias que demostraban la inhibición del crecimiento del bacilo tuberculoso cuando se le exponía a la acción del gas de cianuro de oro. Este experimento fué uno de los pioneros en la quimioterapia. En 1913 Feldt reportó las propiedades bactericidas de ciertas preparaciones de oro que contenían el gropo sulfhidrilo. En 1927 él demostró la efectividad de la tioglucosa de oro contra las infecciones estreptocócicas y por espiroquetas producidas experimentalmente en las ratas. El mismo año, independientemente Lande y Pick discutieron el efecto de las sales de oro en enfermos con artritis reumatoide y en 1928 Forestier empezo su uso sistemático, razonando que si las sales de oro tenían valor en otras enfermedades crónicas, tales como la tuberculosis, probablemente ellas debían de ser útiles en el tratamiento de la artritis reumatoide. Su primer reporte aparecío en 1929 y produjo un gran entusiasmo por el uso de las sales de oro en general.

El criterio para este estudio, además de la historia cl:nica, con exámen físico completo, datos de laboratorio y de Rayos X, implicó un programa individual para cada uno de los enfermos consistente en una inyección intramuscular por semana de sales de oro, un período inicial mínimo de 3 semanas de reposo en cama completo, fisioterapia (incluyendo instrucciones y ejercicios) psicoterapia, uso de analgésicos, sedación, ayudas ortopédicas y, cuando estaba indicado, terapia con esteroides. El grupo control recibió las mismas instrucciones con la única excepción de que no se le administraron sales de oro, en su lugar algunos de ellos recibieron pequeñas cantidades de vacunas estreptocócicas. Sólo fueron incluídos en este estudio los pacientes que observaron por tres meses como mínimo. 507 enfermos recibieron tratamiento y 566 sirvieron de control. El primer grupo se subdividió en un primer subgrupo de 369 enfermos que recibieron más de 300 miligramos de sales de oro y un segundo subgrupo de 138 enfermos que recibió menos de esa cantidad. Este último subgrupo estuvo formado por enfermos que manifestaron cierta sensibilidad al oro, que empezaron su tratamiento recientemente o que por algún motivo descontinuaron su tratamiento.

Taba No. 1.

Enfermos con artritis reumatoide ligera, moderada o severa y su respuesta a la terapia de un mínimo de 300 miligramos de oro. Comparación con un grupo control.

(Véase la tabla en la transcripcion en inglés)

La sal de oro fué administrada por vía intramuscular a intervalos semanarios, empezando con una dósis de 10 miligramos, 20 miligramos y luego 40 miligramos por semana. Cuando se presentaron signos de sensibilidad el tratamiento se continuó hasta que se hubieron administrados 500 miligramos. Entonces, la dósis semanal se terminó en base de las condiciones clínicas del enfermo.

Aquellos con artritis severa moderada recibieron semanalmente inyecciones de 40 miligramos hasta completar 800 miligramos, bajado luego a 20 miligramos por 4 semanas, entonces a 10 miligramos semanales otras 4 semanas, luego 10 miligramos a intervalos crecientes y por último 10 miligramos cada 4 semanas durante varios años.

Aquellos enfermos con síntomas medianos recibieron pequeñas cantidades de las sales de oro después de completar 500 miligramos por ejemplo 10 miligramos mensuales durante varios años. Debe observarse que si durante el período de la administración de 10 miligramos por mes se presentaba alguna exacervación de la enfermedad la cantidad de sales de oro se aumentaban y se acortaban los intervalos de sus administraciones.

El oro se inyectaba en el músculo deltoides con una aguja número 24 sin producir reacciones inflamatorias; se toleraban bien y fué más fácil de administrarse que en la región glútea, previamente, a cada inyección se investigaba que había habido signos de sensibilidad, especialmente glositis o dermatitis y una cuenta globular hemática y un uriánalisis era hecho cada 3 o 4 semanas.

Sumario:

Desde octubre de 1932, han sido estudiados 3,120 enfermos con diagnóstico postivo de artritis reumatoide. Las sales de oro se administraron desde 1940 a todos los enfermos con artritis reumatoide en buenas condiciones generales, a una dósis semanal de 10, 20 y 40 miligramos progresivamente, por vía intramuscular. Cuando no representaron signos de sensibilidad, el tratamiento se continuó hasta un mínimo de 5-500 miligramos administrados.

Un 20% de los enfermos se recuperó o presentó gran mejoría; sólo un pequeño porcentaje de ellos presentaron reacciones severas a la sales de oro.

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BIOLOGICAL AND CHEMICAL WARFARE IN CIVIL DEFENSE*

By Cecil H. Coggins,
Captain (MC) U.S.N.

*Introduction of Capt. H. Coggins, MC, U.S.N.
by Paul C. Thompkins, Ph.D., scientific director,
U. S. Naval Radiological Defense Laboratory,
San Francisco, Calif.*

THE next speaker is one who needs no introduction to those who have long been concerned with ABC warfare. He has for many years been engaged in the field of mass-casualty producing weapons. A postgraduate of the University of California in nuclear medicine, he was the first officer in the military services to be designated as biological warfare officer, which post he held in the navy.

For three years he served in the office of the chief of naval operations as chief of the ABC warfare section, during which time he represented the United States Navy on international committees and missions. In 1950 he was appointed special assistant to the supreme commander of the allied forces in Europe, for ABC warfare. In this capacity, he organized schools for training in ABC defense in each of the NATO countries. He is consequently well-known in both Europe and America as an authority on this subject, and therefore, without further ado, I will introduce Capt. Cecil H. Coggins.

Gentlemen — During this symposium you have already heard a great deal about the deadly effects of the atomic bomb — and of the fallout following an explosion — and you will hear a great deal more. As military leaders and responsible citizens, you are quite naturally seriously concerned with the tremendous power and unique potentialities which attend atomic explosions.

But this morning I wish to invite your attention to still another effect of the atomic bomb — one that has been generally overlooked, but which, in the course of time, might eventually prove to be the most disastrous effect of all! I am going to call this the "blinding effect," and by that I do not mean the loss of visual purple in the retina, which results in temporary optical blindness. I refer, instead, to the paralyzing effect which the contemplation of atomic war seems to have had on our powers of reasoning. We have become so blinded by the brilliance of nuclear fission that we have well-nigh forgotten all else!

This is clearly evident when we review the books, manuals, charts and other literature devoted to civil defense. In more than a dozen of the most recent books on this subject, including last year's records of the hearings on civil defense before the congress, there are not a half-dozen pages in which weapons, *other than atomic bombs,* are mentioned. Even fire storms are presumed, in these publications, to be caused by atomic explosions — in spite of the fact that the most disastrous storms in history have been those resulting from incendiary bombing. In the future, incidentally, we may expect still more destructive fires to be caused by massive flights of incendiary rockets. The truth is, that while our heads have been in the mushroom clouds (as it were), not only have all of the old, conventional weapons been vastly improved and perfected — but also new and ingenious means of producing mass-casualties have been developed — adopted and emphasized — and this is particularly true on the other side of the Iron Curtain.

In this situation there lies a very great danger. Over the past two years Mr. Andrei Gromyko and Nikita Khrushchev have been beating their drums of propaganda in a persistent public demand for atomic disarmament. The crescendo is now rising with increased insistence upon a summit conference, to that end. The Russian proposals, as usual, have been hedged about with impossible conditions, and consequently, up until now they have fallen upon deaf ears. But it is entirely conceivable that the day may come when the people of the free countries of the world may be frightened or tricked into the abolition of atomic weapons, without at the same time insuring against the employment of other weapon systems. If and when that day

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*Presented at the Second 12th Naval District Symposium
on
"Medical Problems of Modern Warfare and Civil Disaster"
U. S. Naval Radiological Defense Laboratory
San Francisco 24, Calif.
June 20, 1958

comes (may God forbid), we shall be in great difficulty and in great peril. You are already well aware that under those circumstances the enemy will have a tremendous superiority in manpower.

I think I can show you that he will also be ready and willing to attack the free world, using the weapons of mass destruction remaining to him, namely the biological, chemical and possibly, radioactive substances.

The Chemical Threat

Let's first consider the chemical threat. On his state of readiness at this moment, I can say very little. I do know, however, as long as five years ago he had 106 chemical plants in operation, at least of which one half were devoted to war gases. His stocks then of the newest German war gases greatly exceeded the combined stocks of the free nations, being quite sufficient for three, or four major offensives on a wide front. At the same time the equipment, training, indoctrination in gas discipline of his troops far excelled that of our own and those of our allies. There was even a curious and I think, very significant difference between the Russian warfare training manuals and our own.

The Russian texts referred to the war gases in that direct confident matter of fact tone that one would use for an old and familiar weapon, while our own publications generally, and have for many years, treated the use of gas as though it were a theoretical and probably remote contingency, yet one which the well-educated soldier ought to learn about.

I must here hasten to say that more recently, under the fine leadership of the present head of the chemical corps, Gen. William Creasy, our chemical warfare manuals have been very greatly improved, but it is shocking to note that some responsible military and civil defense leaders still seem to regard chemical warfare as having only theoretical or historical significance. In my experience, these individuals are invariably those who have had neither training nor experience in chemical warfare and their attitude moreover, reflects precious little familiarity with military history.

In order to gain an idea of the potentialities of the modern gases one has only to read of the gas attacks of World War I, where the most Force, and for one-tenth of all the casualties of primitive gases and the crudest generators, used only a few times, accounted for one-third of all the casualties of the American Expeditionary the entire World War, and yet the gases of today are at least 15 times more deadly than the old, and moreover, they are now distributed by a dozen different superior modern means, including rockets, guided missiles, airplanes, mines, explosive projectiles and land generators, all of which have been field tested and proved to be workable and efficient. It has been found a simple matter to build up a concentration of gas which will blanket large areas and bring death to all not provided with gas masks.

It is not true that launching a gas attack involves a risky gamble with the weather. Not only can weather conditions be predicted with accuracy, but also diurnal fluctuations bring favorable conditions which will insure the success of an attack. Mobile munitions have made wind direction no longer a factor. The cold, stark truth is that modern war gases have become tremendously effective weapons. From the military point of view, they are absolutely superb in their ability to wipe out whole populations of cities and to do so after having been delivered on target from long distances by means which have already been perfected. As civil defense leaders, you must realize that they will not only be the principle weapons of a non-atomic war, but also important auxiliary weapons even when atomic bombs are used. As, for example, when an enemy desires to preserve such an area intact for his own purposes.

The certainty that modern war gases will be used against your civil defense derives from four unassailable facts. First, that the gases are very effective and efficient weapons. Second, that the enemy possesses them in great quantities. Third, that he has the knowledge and means to use them and fourth, that he will not hesitate to do so whenever it will be to his advantage.

Now, you may say that last is a conclusion rather than a fact, but if it is, it is certainly a very valid conclusion, because it rests upon overwhelming evidence from world-wide sources that the Communists have always been, and still are, unscrupulous opportunists. For this reason, we must conclude that the Russian will use gas whenever it suits his purpose. Any other conclusion would be reckless and perhaps suicidal, and once we have come to such a conclusion, common sense and prudence demands that we act upon it.

What is our present state of readiness in civil defense to meet a gas attack?

Suppose we were attacked today, right here in San Francisco, with our military and civil defenses exactly as they are now. What would be the result? Would you like to know? If so, I will do my best to give you an accurate idea.

What It Would Be Like

It is really no longer terribly difficult to *predict* the effects of a gas attack on a typical American city, thanks to Col. John Wood of the medical department of the army. Colonel Wood, working under the secretary of defense, made an exhaustive analysis of the many factors which influence the movement and concentration of a gas cloud in a modern city. The wind variations and the humidity and temperature effects. The hot surfaces and pavements and the resulting turbulences, the windows, whether open or shut, or shattered by high explosives. The population either busy at their tasks, or evacuated, or already on the run. All these variable factors of time, place and circumstance which influence the final result, and then he reduced these findings to a few simple, understandable tables which now serve as guides in studying gas attacks on cities.

Now, we know just what the effect will be, when for example, one square mile of a city is covered to a height of 10 meters by a cloud of nerve gas with an average concentration of 50 milligrams per cubic meter. We know from these studies that the center of the cloud will drift three miles within 30 minutes with a wind speed of six miles per hour. We know that the cloud will double in height and width for each mile of travel for the first 20 minutes while covering two miles, but after that it will hold its height and width unchanged while covering the third mile. By that time 98 per cent of the gas potential has been expended by dilution, but the cloud will already have covered 11.5 square miles and in the average American city will have affected 172,000 people.

The next question is, just how will it have affected them? Thanks to Colonel Wood, and to many field trials, special studies, careful calculations, and hundreds of experiments, we now know this answer fairly well. We also have the experience which has been gained by a good many hundred industrial accidents with nerve gas so that we know what effect a given percentage of nerve gas has on the human being.

Again I want to emphasize that these figures are as accurate as they can be made, and therefore we must regard them as reliable and conservative estimates.

Here we see that the population has been divided into six categories which now have become almost classical. The formula of 20, 30, 15, 15, 13, 16 might almost be used to mean *"Gas Attack on City."* We see that the first 20 per cent get off scot-free. Why? Heaven only knows. Perhaps they were on the wrong level, or in shower baths. Perhaps they were in work-in ice-boxes. They might even have been in shelters, but we do know that this first 20 per cent belongs to that well known and statistically recognizable fraction of lucky individuals who fall downstairs and out of high windows without injury, who wander unscathed through the most violent earthquakes and even the thickest fringe of the gas cloud, but certainly they are on the fringe of becoming casualties. They have been exposed to a concentration of 0 to 7 mgs. of nerve gas per cubic meter. They may have headaches, mild eye pain or a slight tightening of the chest, but these symptoms are regarded as harassing only, and these people could take care of the more serious cases *if* they don't panic. The next 15 per cent are known as the mild cases. They breathe a concentration of 7 to 15 mgs. per cubic meter. They have a frontal headache, dim vision, chest constriction and a runny nose, but they can move about. They don't really have to have atropine, but remember, they have no way of knowing that they're not seriously poisoned. Consequently, they may easily panic. The next 15 per cent are in real trouble. They have been breathing a concentration of nerve gas of 15 to 40 mgs. per cubic meter, and while they're called moderate cases, they need atropine, without which, a certain proportion of them are going to die. They have throbbing headaches, beginning respiratory distress. They are restless, tense, drooling and anxious. Some have twitching muscles and show evidence of confusion. The next group are the 13 per cent who have inhaled nerve gas in a concentration of 40 to 100 millimeters. Their condition is serious. Their poisoning is severe. They show nausea, ataxia, apathy, depression and recurrent painful abdominal cramps. If they are to live they must have repeated doses of atropine, plus artificial respiration when cyanosis and respiratory failure become evident. The last group, 16 per cent have had it. They breathed an atmosphere containing 100 to 200 mgs. per cubic meter of nerve gas. They show rapidly progressive symptoms of coma, Cheyne-Stokes respiration, violent convulsion with incontinence and central depression of respiration occur, paroxysmal spasms of the tongue and throat. These victims are doomed.

Hypothetical Attack

All right you say, you have divided the victims of a gas attack into categories. What about a gas attack on San Francisco?

Very well, let's set the conditions. First, the weather will be typical of San Francisco with stable temperature gradient, neutral or inversion, the wind six to 15 miles per hour, the humidity 75 per cent, all average mind you, not optimum conditions. The time is 1000 on Friday, June 20. The enemy has approached within 500 miles of the coast before showing up on our radar screens. In less than an hour from now his bombs will begin to drop on the streets of San Francisco. What our defensive forces are going to be able to do in this hour, I'm not going to guess. I hope better than at Pearl. Ten heavy bombers loaded with nerve gas are headed for San Francisco. Each carries 10 tons of bombs; a total of 100 tons.

Although no less an authority than the chief of the U. S. Air Force has testified before the congress that 70 per cent of such an attacking force may be expected to get through our defenses, which would be in this case, 7 planes, I am nevertheless assuming that *only one bomber* will be able to pass over the city! Furthermore (I am an incurable optimist), I am assuming that only one-half of his bombs are dropped with accuracy into the city, and since in these five tons a full half are casing and hardware there remains only 2½ tons of nerve gas which is actually liberated into the city of San Francisco and even then, it appears that these bombs failed to touch a single military or industrial target of any importance.

Instead, these bombs splatter down in a ragged line from the corner of Golden Gate Park, across the San Francisco College for Women and Presidio Avenue, and thence to Broadway. There is a minimal loss of life and property from the explosions, and there is almost no residual gas, most of the nerve gas having been completely vaporized. At first glance it would seem that we have been lucky, but let's have a little closer look to examine the results. It's evident right away that these 2½ tons have been dropped in an area of one square mile and there has been produced consequently, an average of nearly 60 mgs. per cubic meter. Let's superimpose our known pattern of dispersion in the direction of the prevailing breeze to find out just where our 11.5 square miles of gas victims will be.

Now, this picture is staggering. First of all, our map shows that three-quarters of a million people are in the northeast corner of this city, with a half million in one postal district. That is the area between Broadway and Market streets, which includes Chinatown and the financial district. Now, it is apparent that our loss of life is going to be frightful. How many people are in this gassed area? The overlay shows that in this area of 11.5 square miles there are actually 582,000 persons. To see what will become of them let's return to our formula of 20, 20, 15, 15, 13, 16. First, we see in the gassed area, but escaping injury are 116,000 persons. How they react to the sight of the dead and dying around them is largely a matter of training. The great difficulty will be that all of the conditions for panic are present. That is, a danger *which is unknown, which is silent and which is invisible*. The frightening appearance of the victims, struggling for breath and in violent convulsions, the sounds of groans and screams arising from a hundred city blocks, and most of all, the feeling of imminent destruction in an environment where there is a rapidly narrowing or limited escape route to safety. Panic will occur at elevators, staircases, fire escapes and even in the streets. The passage of cars and trucks is blocked, which they will be, by thousands of bodies of persons dead and dying. Now, such panic as this quickly becomes widespread, and the loss of life occuring in the precipitous struggle to escape, very often, has exceeded that due to the primary cause of the panic. Now, the first 116,000 have escaped injury from the nerve gas cloud, but how many hundreds of them are going to die on the staircases of the office buildings?

Let's pass to Category Two. Here is another group who are just as subject to panic as the first group is, and even more so, because they do have some symptoms, which to them, can only seem exaggerated in an environment of catastrophe. How many of them will destroy each other in a fight to escape? How many will hurl themselves from open windows? How many will be stunned, apathetic and unresponsive, or how many will find the strength to resume purposeful activity for the benefit of their fellows? I can predict the physical casualties with reasonable certainty, but the psychological damage is beyond my power to predict. What of the 15 per cent who are mildly poisoned? The same is true for them. As for the others, they really don't have to have atropine, but their symptoms are frightening. They don't know how great their danger is, and neither does anyone else, and it is *probable* in this group that panic will occur! Their beginning dimness of vision is in itself a terrifying symptom which will contribute to the urgency of their sense to flee. These 87,000 people cannot be expected to render much help to others, even if they have been trained.

This completes the first three classes of those who were injured. They total more than 300,000 and they're scattered over 1,100 city blocks. They hold in their own hands the power of survival or of extinction, both for themselves and for the thousands of real gas victims.

Let's turn now to these. Here are some 87,000 persons moderately gassed, but they need atropine. Some of them more than one dose. They're gasping for breath, clutching their middle and fighting to get into the street. Another 75,000 are still more seriously ill. They're vomiting, or staggering, or lying on the ground in violent convulsions. They each must have several doses of atropine if they're going to live. Many will require prolonged artificial respiration, some of them even tracheal intubation for recovery.

The final group of 93,000, which to external appearances is indistinguishable from the last category, are nevertheless beyond hope. They will simply die a bit more quickly and their bodies will be found in the streets, the stairways and the offices.

What is the overall picture three hours after the attack? We can only conjecture, but it appears exceedingly unlikely that help will arrive in time to save the seriously gassed. The streets are choked with the bodies of the ill and with those already dead. For this reason the passage of ambulances and relief vehicles through the streets is impossible, but more than that, it is quite pointless, since more patients will be encountered in the first few blocks than the entire hospital system can care for.

Communication systems are paralyzed. Only busy signals are heard on the automatic phones. Approximately 350,000 atrophine syrettes are needed. The pitiful few syrettes that arrive are quickly used on the periphery of the stricken area. At the end of six hours (that is four o'clock in the afternoon), there are 120,000 dead and 60,000 dying and 80,000 crying for medical care. Not until the next day, the morning of June 21, will medical aid even begin to reach into the gas area, and more than a week will elapse before all of the bodies are removed. It is probable that panic will be found to have claimed several thousands, and consequently, that the final death toll will be 225,000.

Now, in order to produce such casualties by atomic weapons, the enemy would use at least a bomb of 40 kilotons in energy; that is to say, twice the bombs that were used at Nagasaki and Hiroshima.

This is, I think, ladies and gentlemen, a fair and conservative picture of an attack with modern chemical weapons. Frightful? Yes, it is. Alarming? I certainly hope you'll find it so. Unavoidable? Unpreventable? Certainly not. On the contrary, with a reasonable amount of training, an adequate supply of atropine, and a relatively inexpensive modification of our modern ventilating systems, 95 per cent of this loss of life can be avoided. There's even a small inexpensive device which will *prevent it altogether!*

This device is a gas mask. "Oh," but you say, "Can the American public be persuaded to carry gas masks?" Perhaps not right now, but it can be done with effort and inspiring leadership. Britain did it; of course the time was war. Eighty per cent of the British still have their gas masks. The citizens of Great Britain, Denmark, Sweden, and Russia all have some protection today; pretty good. The U. S. almost none. Britain is preparing even now to distribute new masks to every citizen, free of charge. Here we only have a few masks in the war surplus stores, and for sale by the mine safety people, for industrial purposes. The country with the best gas discipline is Russia. This isn't surprising when we know positively that Russia is prepared to use gas in any war which comes. Not only do we know this, but the Communist leaders are no longer trying to conceal their intentions. Their minister of war has already announced his intention of using biological warfare and chemical warfare. Under this circumstance, one cannot help but wonder what more is necessary to convince our American citizen that the price of liberty is the ability to meet all weapons of mass destruction.

Biological Warfare

While you're pondering over this affair, let's pass on to biological warfare. Here again we have a weapon, or a weapons system, capable of producing mass casualties which has been known for centuries, but which has undergone extensive research and remarkable development in the past 15 years.

The important thing now is just where does BW, or biological warfare stand in the military arsenal of war? Where does it stand today? You'll not find a full and convincing answer to this question among the distressingly meager publications of the civil defense agencies. In more than 136 publications which have been offered for training purposes in civil defense, not more than five or six deal with the subject of biological warfare by more than a casual reference. Some of these are: a pamphlet called *What the Farmer Should Know About Biological Warfare,* another one called *What You Should Know About Biological Warfare,* Training Bulletin 1118 called *Biological Warfare Against Public Water Supplies,* Technical Manual 11-10 of 1953 entitled *Defense Against Biological Warfare,* and, in addition, the "Bible," 24 pages representing exactly 10 per cent of the Handbook AG-11 called *Health Services in Special Weapons Defense* published in 1950.

The second of these, *What You Should Know About Biological Warfare,* was written by someone who apparently was determined that the public never know any more than he knew about biological warfare, which was to say, precisely nothing. In pleasing contrast, however, to this, the other manuals are well and carefully done. They suffer only from the serious handicap of being restricted to unclassified information. Incidentally, while it may be unavoidable, I believe that this handicap is the most important inherent weakness in civil defense education. In order to stimulate their interest and enlist their whole-hearted co-operation, the general public needs to be told more than is presently regarded as fit for their ears! Now here, the military services enjoy a great advantage in being able to provide their personnel with the wide variety of classified information on a *need to know* basis. As we might expect within the services, large numbers of papers, staff studies and reports, and military manuals, have been written which deal fully with the threat of all three ABC weapons, and they provide increasingly realistic guidance for defense against them. Do these military publications answer our questions about the importance of biological warfare? Yes, they do. What is the answer? Well, bearing in mind the fact that this talk is unclassified, I'll nevertheless try to give you a satisfactory answer within that limitation. If some details seem to be conspiciously lacking, please bear with me. First of all, you must know that enormous strides have been made in biological warfare since World War II, and even since the last civil defense publication on the subject. Here in the U. S., our policy has been one of defense. Our research is primarily to perfect defenses against biological warfare attacks, but we found out long ago that defense and offense are inseparable research problems. One cannot be tested without the use of the other. I have no figures on this matter, and if I did, I wouldn't feel free to use them, but I will make a guess that approximately 33,000 scientists' years and nearly one-half billion dollars has been spent on biological warfare research problems. As a result of this tremendous research program, even unclassified publications of the military services will now frankly acknowledge the probable effectiveness of biological warfare agents.

For example, the Bureau of Medicine and Surgery syllabus states, "Agents of biological warfare may be selected to produce many strategic, and certain tactical goals, ranging from a brief, but crippling disease, to widespread serious illness with many deaths." Again, as a result of our research with biological warfare defense, the U. S. Joint Chiefs of Staff placed biological warfare in the highest strategic category, on a level with atomic warfare, and publicly declared their intention to maintain a state of readiness which would enable the American forces to retaliate in overwhelming fashion with biological warfare attack, when and if biological warfare weapons are ever used against us.

Can anything be said which is more convincing than that? I should state that all the progress in biological research has not been made by the U. S. Many of our allies have joined in studies to insure that we have effective defense, and some of the finest work has been done by them. Just what has been accomplished? Well, I can assure you that while the biological warfare experts have as yet no Hiroshima or Nagasaki to point to as proof of the pudding, nevertheless their activities have not been confined to ivory tower guessing or windy extrapolations of laboratory data. It is known that hundreds of field trials have been held and that sometimes live and virulent agents have been tested and scores of munitions perfected. Attacks have been simulated against entire cities the size of San Francisco, and after careful calculation, large casualties declared by the referees.

Time after time, live, but, harmless agents, have been used in simulated sabotage operations against important strategic and tactical forces of the military population, with results sometimes staggering in their implications. Trial attacks have been made on a great variety of both crops and animals with results that should convince the most skeptical admiral, general, or civil defense leader.

Is all this known to the Russians? If it isn't, then it's because they can't read English. We know for example that the Russians have always had a great interest in Camp Detrick, Maryland. We know that over the past 15 years they have collected hundreds of books, magazines, and newspaper articles which have been so conveniently published for them in the U. S. Not only about Camp Detrick, but about the laboratories at Edgewood and Dugway, Utah, and the Naval Biological Laboratory right here in Oakland. We also have definite information that the Russians have carefully followed the work being done within these laboratories by the simple expedient of collecting all our scientific journals and collecting from them the scores (I should say *hundreds*) of articles relating to biological warfare research which have been published regularly in them by the *very same scientists* who are doing the work! Now, I don't doubt that such research work has, by being published, contributed heavily to the sum of human knowledge and the welfare of man, as well as to the professional reputations of the authors, but I declare without any doubt of hesitation that it has also contributed very heavily to the enemy's state of readiness to use these dangerous weapons against our own U. S.

What else do we know? We know that in addition to scavenging the work done in other countries, which includes Japan, Germany, China, Poland, and in others, the Russians have done independent work of their own on plague, anthrax, botulinus toxin and the salmonella group. We know furthermore, than their own research work has been hastened; hastened as it was in the field of guided missiles, by the importation and utilization of many German biologists and technicians. What do we know of the enemy's real intention regarding biological weapons? So far as I know, we only have one important clue, and this was provided five years ago when the Russian government suddenly and blatantly accused the U. S. before the whole world of having launched biological warfare offensive in Korea. Acting on the sound psychological principle that no lie succeeds like a big lie, and with the expertness born of years of constant practice, the Communist leaders concocted a whole series of brazen fabrications and propped them up with dozens of brain-washed and well coached eye witnesses. Having launched their charges over the radio, news services, and even before the United Nations assembly, these bold prevaricators tied up the whole bundle of propaganda in the form of a book solemnly entitled *America's Guilt in Biological Warfare*, and they put a copy of it in every library in Europe and Asia which would accept it. Why? There is only one explanation that makes sense and that is that the Russians were trying to document a fake incident; trying to give historical weight to their false charges so that, perhaps years from now, they might say, "History shows that it was the U. S. which, in 1952, first used biological warfare on a large scale. The attack which we launched last week was only in retaliation!"

Where and How?

Now, the $64 question is this: If the Russians do attack with biological weapons, where and how will they attack, with what organisms and with what result? This is a question I have very often been asked, and it's probably the most difficult question which could be asked in the whole realm of ABC warfare, not only because it presupposes an intimate knowledge of Russian intentions, which I haven't got, and capabilities, which could do credit to any intelligence organization in the world, but also an honest straightforward answer should be supported by factual data, the kind of data which is usually non-existent, or else buried under a heavy layer of security restrictions.

Now, please don't misunderstand me. I think such restrictions are properly necessary. I approve of them. I'd have more of them rather than less. There is nothing, however, to prevent us from describing briefly a purely hypothetical biological warfare attack on one of our cities, and there is no practice more useful than this in the training of our defensive forces. Let us suppose, then, that a state of increased national tension in which our own forces have been on a continous alert for the past two weeks exists. Our radar warning net is fully manned. Submarine and surface patrols are being manned right now at sea, and a large corps of coast watchers are patroling the beaches. At 2000 on the evening of Oct. 1, there is a light westerly breeze of five knots which pushes a thick blanket of fog from the ocean across the beach and up the hill of the Richmond district and Golden Gate Park of San Francisco. The humidity is 85 per cent, the temperature 65 degrees, and the temperature gradient stable, and a condition of inversion prevails.

Three miles off the beach, completely hidden by fog, a snorkel breaks the surface, is quickly joined by a periscope and an object that looks like a steel flower on a stem pipe. The three objects, less than a yard apart, proceed in a leisurely, northward direction. The periscope slowly rotating and seeing nothing but fog. Suddenly, the steel flower bursts into a white cloud of vapor as the nozzles are turned on. The vapor mixes with the fog silently and drifts shoreward. After holding a course parallel with the shore for 20 minutes during which time she has traveled two miles, the submarine dives and disappears from the surface.

In this 20 minutes, 200 gallons of a rich bacterial culture has been sprayed from the nozzles. Ninety-five per cent of the particles are less than five microns in diameter, 50 per cent of them are less than one micron. One hundred gallons of this culture is a mixture of pasturella pestis, the organism which causes plague, in a concentration of six times 10 to the ninth per milliliter, and the other 100 gallons is a culture of bacterium tularensi in a concentration of 7.8 times 10 to the ninth per milliliter. These two slurries are physically, chemically and biologically compatible. The organisms have been treated to improve their viability and power to travel, and both are cultures from highly virulent strains.

The fog lifts, or is dissipated, before it reaches 19th Avenue, but the invisible cloud of organisms continues eastward. By 10 p.m., it has reached Divisidero Street. Forty-five minutes later it is spread across the Embarcadero and is reaching across toward Alameda. On the way across the city, the aerosol is subject to a thousand eddys, crosscurrents and turbulences. It flows through open windows and under doors to become a secondary aerosol within thousands of homes. It will persist there for hours and days. It is strongly sucked into the ventilators of factories, office buildings and theaters, to be circulated again and again through a hundred thousand pairs of lungs. The cloud of germs passes across the bay, turns southward, and is finally dissipated 25 miles from its starting point. Nothing more occurs which could give a clue to the fact that an attack has occured. Nothing is happening, except within the bodies of the victims, who still don't know that they are casualties in a war. The hands of the clock turn around through 48 hours and a strange thing happens. Everybody in the family begins to cough, slightly at first, and then with increasing violence. Chest pains appear, temperatures start to rise. Strangest of all, the doctor's phone is busy. Apparently he has left it off the hook. Now, another doctor cannot be reached! Finally, *all* the doctors' phones appear to be busy! Here begins the panic, even before the symptoms of the disease become fully developed.

Rush to the neighbors to get help? Too late! The neighbors are already in the streets comparing notes with other neighbors. The population turns to the radio and to their TV sets. Anxiety mounts at first, as the first disconnected, puzzled and incomplete news is released. The public is urged to be calm. This exhortation has just the opposite effect. The third night comes and goes. In the morning, there are few left standing erect and well. Now, the radio states that a disease epidemic has occurred, that doctors are flying in from a dozen cities, that antibiotics are on the way, that all persons are ordered to stay off the streets and await the arrival of relief trucks. A new sound is heard. The screams and cries of panic are changing to cries of grief. Across the entire northern part of the city, in every home, the breathing of the patients is becoming labored. Cyanosis has developed, coma is supervening.

Before the week is out, there will be 190,000 deaths. The following week 80,000 more. Part of these are primary infections and part secondary. The third week will show a drop to 14,000, as the broad spectrum antibiotics begin to take effect. The fourth week only 2,000, and the back of the epidemic will be broken. Is there need to continue to describe the utter desolation of the people, the grief, the rage, the despair? There is no need to speak of the frantic efforts to identify these diseases and isolate the organisms, which is conducted by a dozen special teams from the National Health Institute, the Hooper Foundation, the University of California, and Stanford. There's no need to mention the panic in the streets, the shooting, the governor's proclamation, the martial law, the arrival of the militia, the pitched battles between the citizens of Walnut Creek, Petaluma, and Richmond, and the fleeing citizens trying to leave the stricken area. No need to tell of the thousands of homes found abandoned and empty, except for the bodies left behind. Why mention the stench, the parade of trucks piled high with corpses, the huge graves dug by steam shovels? No, I'll leave that to your imagination. All I want to say is, that in the end, by our calculations, 286,000 people have died and an equal number have recovered, out of a total exposed population of 1,250,000, of which 825,000 are primary exposures and 420,000 (down in the peninsula), exposed to secondary infection.

The rate of infection is about 46 per cent of the total population, and of the people who have become ill, nearly 50 per cent are dead. This is the sort of result that may be expected when the human being is simultaneously exposed to massive doses of virulent strains of two different pathogenic organisms. If results such as these are possible, and all of our experimental work seems to indicate that they are, then we must concede that biological warfare is as worthy of our attention as atomic warfare.

You can draw your own conclusions. Apparently our enemies have long since done so. I have here a translation of a lecture given 18 months ago by Col. Adam Milkovich of the Russian army. Colonel Milkovich is also a doctor, a bacteriologist, and he is a professor in the Moscow Institute. Colonel Milkovich says (I quote), "In a practical sense, the question of the possibility of the use of biological warfare weapons in future wars is not considered today a subject open to debate, for it is known that an enemy can successfully attack human beings, and even animals and plants, with biological agents," and again in the same lecture he says, "From results of comparative studies of losses of life from conventional weapons, war poisons, and atomic energy on one side, and losses from biological weapons on the other, it is believed today that a biological war would have the greatest effect of all," and finally he said, "Since biological weapons are so regarded today as more dangerous, not only than conventional weapons, but also more dangerous than chemical and atomic ones, we believe that at least the same attention should be given to this question as to chemical and atomic weapons." (I never thought I'd see the day when I agreed with a Communist.)

There is little more than I can say about this subject at this kind of a meeting. I simply want to say, I know many of you have attended ABC training courses, which were given by the military services under various security classifications, so there is much that you already know, more than I have told. For those of you in responsible positions in civil defense organizations, who have not yet attended such courses, I most sincerely urge that you do so at your earliest opportunity. I believe that it is only from such training that sufficient information is obtainable to constitute a solid foundation for realistic thinking. By now, however, you should have heard enough to convince you that biological weapons are real, and that they constitute a serious threat to our safety, in time of war, and that they must be included in any realistic civil defense operation and training.

Realistic Program

What, then, can be regarded as a realistic program of civil defense? Briefly, it is a program which includes provisions to meet the threat not only of atomic bombs and local disasters, but also of other major weapons likely to be used against us.

It includes organization, training, and material. We must provide ourselves, not only with burn kits, but also with atropine syrettes. Not only with bandages, but also with BAL ointment. Not only with Geiger counters, but also with the disease-warning system. Our ventilation intake filters must not only protect us against fallout particles, but also against bacteria and poison gas. Our decontamination procedures must also provide for biological and chemical, as well as radiological decontamination. Above all, our training program must *remedy,* and not *contribute* to our blind spots; this dangerous preoccupation with things atomic. We live in perilous times and events move very rapidly. The state of our preparedness for defense must be of gravest concern to every citizen.

What can we say about our preparedness? About 50 years after development of the most deadly gas that the world has ever seen, our entire civil population is without respirators of any sort, and even the masks of our military personnel are locked up tighter than were the ammunition boxes at Pearl Harbor. That is even more serious than the lack of personnel dosimeters, a deficiency that will, after an atomic attack, cause half the precious reserve of blood to be poured down the rat-hole of asymptomatic, and yet hopelessly irradiated patients. In this latter case, a great many people will be saved. In the former, there will be no survivors. Perhaps there are many of you who agree that vigorous action is needed to remedy the deficiencies that I've mentioned. Perhaps some of you are thinking, "*They* really ought to do something about this. *They* must give us the needed equipment. The authorities ought to furnish us with the information that we really need," and so on. I have a very strange feeling, and yet it's quite a strong one, that "*they*" are sitting out there in front of me at this very moment! That the real authorities are right here in this room. Since only knowledge can confer real authority, and nearly all of you have special knowledge, training and skills, which you are already devoting to our national defense, I rather think then, if our efforts, our defenses, are to be improved and perfected, it will be through *your* efforts and efforts of similar groups all over the country. *You* have the power, and at the same time, the responsibility, for assuring that our defenses are adequate to meet *any attack* made against them, including that which may be made by biological or chemical weapons! I wish you good luck!

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ABSTRACT

PNEUMATOSIS INTESTINORUM HOMINIS*

With A Case Report

The title of this presentation "pneumatosis cystoides intestinorum hominis" will be interchanged often with the following terms: pneumatosis, pneumatosis intestinalis, intestinal pneumatosis, blebs, blisters, vesicles, gas cysts, intestinal gas cyst, intestinal blebs, intestinal vesicles.

Jacob Reichert, M.D., F.I.C.S., F.I.A.P.
Phoenix, Arizona

PNEUMATOSIS Cystoides Intestinorum Hominis is presented in an extensive paper in addition to a case report, thus increasing the number of reported authentic cases in the medical literature.

Apart from the general description of the entire problem of pneumatosis intestinalis, a review of the existing literature was made: particular consideration was given to a number of theories and views regarded as very authoritative in explaining the etiology and pathogenesis of this disease.

The case described in the original presentation was diagnosed preoperatively. Most of the reported cases were found during the performance of autopsies and few were accidentally discovered during an operation for intestinal obstruction.

Pneumatosis Cystoides Intestinorum is a rare disease and the first quite orderly description was reported in 1728 during an autopsy by Du Vernoi. Since so long a time, approximately 230 cases were reported in the medical literature.

Until 1956, 49 cases were authenticated in the United States, of which just a few were diagnosed pre-operatively; some were found during surgery, and the rest while performing autopsies.

Pneumatosis Cystoides Intestinalis is frequently observed in a number of animals and with particular frequency in pigs. It is reported to have been reproduced experimentally in hogs and other domestic animals.

Patients afflicted with this disease are extremely emaciated and bed-ridden for a number of years due to its chronic nature. It may be affirmed that pneumatosis seldom if ever appears in an acute episode in the early stage of the disease. Because of the chronicity and slow progress of the malady, and progressive changes of personality, the average patient does not seek medical attention. It is usually the patient's family who become aware of the gradual deterioration of the afflicted, and proper medical attention is then provided; such decision coincides often with the symptoms of an acute intestinal obstruction.

Seemingly slow progressive inanition and the resulting involvment of the gastrointestinal tract, establishes a peculiar apathetic behavior.

The evoked indifference and drastic changes of personality in those who are chronically affected with intestinal pneumatosis is likewise characteristic and of diagnostic importance in paralytic ileus, and intestinal obstruction, not associated with this pathologic entity.

The presented original paper discusses thoroughly the emotional and personality changes resulting from the effects of this disease and the symptomatic characteristics of pneumatosis, in addition to those enumerated in the case report, as observed in vivo.

In referring to medical history, it is revealed that the ancient Hebrews of the Talmudic era of the land of Canaan and Babylonia, can be credited with originating the science of pathology 2,000 years ago, *by their discovery that diseases may be associated with morphological changes in the organs of the body and become manifest by structural alternations and functional abnormalities.*

Structural alterations were the basis of their doctrine. In the main, it conforms with the theories promulgated by modern science.

The anatomic structural and histoligic changes of the organs resulting from diseases were the fundamentals of the Talmudic doctrine. Their great knowledge of anatomic pathology was mainly obtained from the observation of slaughtered animals. They were able to ascertain

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Presented at the Tenth Annual Teaching Seminar of the International Academy of Proctology in Mexico City, April 9-13, 1958.
The original paper was published in the American Journal of Proctology, Volume 10, No. 3, June, 1959 and No. 4, August, 1959.
Acknowledgment is made to the International Academy of Proctology for the authorization of publishing this original abstract in English and Spanish Commentary and Conclusions.

*From the Department of Surgery of Memorial Hospital, Phoenix, Arizona.

the course and lethal outcome of many diseases on the basis of the existing pathological condition. The main reasons for this historical oblivion of medical progress for a period of 20 centuries, was due to the fact that the then overall existing physicians could not read the Talmud and were not able to understand the Babylonian teachings of that particular time. The Talmud was rather considered as a Corpus Juris of ritual law, rather than a treatise on medicine.

The history of medicine and the progressive knowledge obtained in animal pathology which may even be referred to Pneumatosis Cystoides Intestinorum Hominis and Animalis, reveals that Rudolph Virchow and Julius Cohnheim, 19 centuries later, finally rediscovered pathological anatomy as the basis of our modern teachings.

The great acquaintance of the ancient sages of Babylonia with visceral pathology, obtained from innumerable autopsies made on domestic animals, contributed enormously to the progress of comparative anatomy, experimental surgery and diagnosis.

In reviewing the past and present literature, the impression remains that the incidence of pneumatosis afflicts mostly the middle age group of the male population, followed by females and children.

Cystic pneumatosis was seldom described as a primary affection, due to its unknown pathogenesis and variable syndrome.

The most frequent recorded findings including those in the presented case, are the almost constant association with chronic disturbances along the gastrointestinal tract and its adnexa. The most common pathology encountered is the presence of pyloric stenosis, gastric and duodenal ulcers, chronic appendicular infection, progressive intestinal obstruction. However, any chronic, morbid affection of the alimentary tract, regardless of its location, may predispose to the formation of intestinal gas cysts.

The main characteristic of Pneumatosis Cystoides Intestinorum is the formation of multiple gas cysts of variable size localized primarily under the visceral serosa of the bowel. Particularly susceptible is the intestinum tenue; however, the simultaneous involvement of the large bowel, stomach, duodenum and jejunum is often present.

Apart from the occurrence of gas cysts in the visceral serosa of the intestine, their presence is also noted to a lesser degree in the submucosa and muscularis mucosae. These air bubbles in the deeper layers are visualized in the form of small, flat, wart-like elevations covered by normal appearing mucosa, or they assume a sessile or pedunculated configuration.

The subserosal blebs are transparent and separated from each other by a very fine structure of connective tissue in a honeycomb pattern. The formation of gas cysts often appears in the form of clusters of grape-like configuration. The continuous increase of these gas filled cystic compartments causes enormous crowding and overlapping, which often assumes the aspect of large granulomas; the incidence of intussusception and volvulus is quite frequent, due mainly, to its increased weight and size, by telescoping through the adjacent segments of dilated intestine. The diagnosis made, as expected, is usually of intestinal obstruction; however, regardless of surgical intervention and relief of obstruction, the main pathology is rarely recognized.

Seemingly, in the last decade the increased number of reported cases indicates that the knowledge of the existence of Pneumatosis Cystoides Intestinorum is becoming gradually more known to the medical profession. The available textbooks of pathology and surgery do not mention pneumatosis intestinalis, and this study recommends further acquaintance with this rare pathologic entity.

The clinical picture of a patient afflicted with pneumatosis reveals great loss of weight, distended abdomen, atrophy of subctaneous tissues, and visible intestinal peristalsis through an emaciated abdominal wall. The skin is subicteric and ashy in color. They usually claim to enjoy good appetite and to have an adequate intake, however this does not seem to be true.

Apart from clinical history and complete physical examination, the greatest information may be obtained from roentgenograms.

A gastrointestinal series followed by a motor meal and barium enema in subjects afflicted with pneumatosis reveal typical honeycombed, translucent configurations which are interpreted as the presence of air bubbles retained within the intestinal wall.

It is often found that the process of pneumatosis involves also the mesenterium and omentum.

The presence of a pneumoperitoneum lacking the typical alarming clinical symptoms of a perforated hollow viscus, should remind us of the possibility of pneumatosis intestinalis.

The pathogenesis and etiology of this rare disease are not clearly understood. At the present time, there are five theories explaining the origin and cause of this intestinal affection. The existing theories are of bacterial, mechanical, chemical, nutritional and neoplastic origin, and are extensively described in the presentation.

THEORY OF LYMPHATIC HYPERTENSION OF THE ALIMENTARY TRACT

The author of this presentation sustains the theory of the existence of lymphatic hypertension affecting the entire alimentary apparatus. The cause and formation of gaseous cysts within the intestinal wall is probably due to the direct effects of osmosis and lymphatic hypertension. The presence of ascitic transudate which accompanies pneumatosis is found to be frothy and of oily consistency, and seems related to the digestive chyle products which may be termed, when present in greater amounts, as chyloperitoneum.

The presence of free air under the diaphragm in pneumatosis intestinalis is probably the result of continuous release of gasses from within the blebs retained under the visceral serosa.

Seemingly the entire lymphatic system of the digestive tract is involved, with particular accentuation of the antimesenteric surface of the intestine, probably due to the increased circulation required by the Peyer's lymphatic aggregates. Polyserositis, or so-called Pick's disease, may follow the same mechanism, and finally present the characteristics due to lymphatic hypertension, regardless of the origin of its etiology.

The presented case of pneumatosis was submitted to an abdominal laparotomy, because of an intestinal obstruction, resulting from an intussusception of a large pneumocystic granuloma. The exploration revealed that the obstruction was in the terminal ileum. A segmental resection was performed with an uneventful recovery.

The patient was seen again three months later because of postprandial nausea followed by vomiting which was reported to have begun two weeks prior to her return visit. Extremely dilated small loops were noted roentgenologically, particularly in the upper right quadrant. Her status deteriorated rapidly with increased vomiting and abdominal distention. Gastric suction was attempted, but the tube could not be advanced beyond the jejunum.

A second laparotomy was done approximately six weeks after rehospitalization, and the roentgen findings confirmed the presence of a jejunoduodenal volvulus, which was easily disengaged. No abnormalities attributable to the first laparotomy were found, and the resected area was completely healed, with complete arrest of the pneumatosis. Despite these apparently favorable factors and the short duration of the surgery, the patient became moribund and died 14 hours later.

Autopsy revealed a grossly distended "hour glass" stomach and small intestine, the latter showing marked discoloration below the ligament of Treitz. The jejunum and its mesentery presented a tortuous, edematous, discolored appearance and the jejunum was filled with gas and fluid. No evidence of gaseous cysts were found. A presumptive diagnosis of a cerebrovascular accident, taking place just before or during surgery, was made.

Summary

1. A review of the world literature of Pneumatosis Cystoides Intestinorum Hominis, with a case report, is presented. It occurs rarely in man and is of unknown pathogenesis.

2. Formation of gaseous cysts on the intestinal visceral serosa and through the intraluminal mucosa occurs along the gastrointestinal tract as a result of this pathologic condition. A foamy, oily transudate is a concomitant finding.

3. The disease is chronic, of unusually long duration and progresses slowly, causing emaciation, invalidism and personality changes. Presenting symptoms are those of chronic progressive intestinal obstruction.

4. Etiological theories are explored. A working hypothesis of lymphatic hypertension is formulated.

5. Segmental resection of intussuscepted terminal ileum resulted in arrest of cyst formation and general improvement of patient.

6. Intervention for strangulated jejunum, three months after resection, was delayed by patient beyond safety.

7. Autopsy showed good results of first laparotomy and revealed jejunal strangulation. A presumptive diagnosis of a cerebrovascular accident, before or during surgery, was made.

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550 W. Thomas Rd., Suite 133 Patio C Phoenix, Arizona

Comentarios y Conclusiones

PNEUMATOSIS CYSTOIDES INTESTINORUM HOMINIS*

Con la presentación de un caso clinico

El título de este trabajo, "pneumatosis cystoides intestinorum hominis" a menudo se intercambiará con los siguientes términos: pneumatosis, pneumatosis intestinalis, intestinales pneumatosis, vejiga, ampolla, quistes de gas, quistes de gas intestinales, ampollas intestinales, vejigas intestinales.

Jacob Reichert, M.D., F.I.C.S., F.I.A.P.
Phoenix, Arizona

EL CASO clinico descrito revela que este enfermo fué enviado para operarse en 1953 con el diagnóstico de "Fistula colecisto-duodenal con calculo biliar impactado en la válvula ileo-cecal produciendo oclusión intestinal intermitente." El diagnóstico post-operatorio fué "Vesícula que no functiona, peritonitis generalizada, etiología no determinada." La serie gastroduodenal pre-operatoria mostró pneumoperitoneo. La existencia de pneumatosis como padecimiento no fué reconocida. Las placas simples de abdomen tomadas en el postoperatorio, 10 a 15 dias después, confirmaron la notable disminución en el pneumoperitoneo, pero una pequeña cantidad de aire era visible todavia bajo el diafragma derecho. La disminución en la cantidad de aire fué debida probablemente a la presencia de dos canalizaciones colocadas en los cuadrantes superior e inferior derechos, cuando se hizo el diagnóstico radiológico. En Febrero de 1957, el radiólogo hizo el diagnostico de "padecimiento quístico grave del mesenterio" por primera vez. En Marzo de 1957 se presentó una obstrucción intestinal, y los hallazgos operatorios fueron: "Pneumatosis generalizada del intestino delgado con formación de grandes granulomas incluyendo formaciones císticas con gas en su interior." Se encontró que una de estas tumoraciones granulomatosas situada en el íleon terminal aproximadamente a 15 o 20 pulgadas de la válvula ileocecal estaba invaginada. Al no poderse desinvaginar se hizo la resección segmentaria obteniéndose una evolución satisfactoria.

Hay que hacer notar como en el tercer día postoperatorio, se presentó enfisema subcutáneo en la incisión y en ambas regiones inguinales. La placa simple de abdomen tomada el décimo día postoperatorio mostró la desaparición del pneumoperitoneo, sin existir aire subdiafragmático y sin visualizar quistes gaseosos. Tres meses y medio después de esta operación se hizo una segunda laparotomía por nueva oclusión localizada en el cuadrante superior derecho. El diagnóstico de la segunda oclusión intestinal se hizo cuatro semanas antes de admitirse la operación. Al ser operado el enfermo estaba en condiciones críticas. Los hallazgos operatorios fueron: Vólvulos del yeyuno adherente a la cara anterior del hígado.

El enfermo murió a las 14 horas de operado con falla coronaria aguda. La autopsia mostró estrangulación del asa aferente del yeyuno con torsión de su mesenterio. Es obvio que la estrangulación y torsión del yeyuno bajo el ligamento de Treitz no fué notada en la operación Esta zona está expuesta fácilmente al edema con interferencia vascular debido a la pequeña salida al rededor del ligamento de Treitz para el paso yeyunal y el acomodo del asa fija. En el estómago se encontró una estenosis pronunciada en forma de reloj de arena en la porción antral, como se muestra en las ilustraciones. La estenosis gástrica no fué reportada en las operaciones efectuadas en 1953 ni en Marzo de 1957. Durante la operación de Marzo de 1957 a pesar de que el estómago fué revisado, no se encontró la estenosis. La omisión fué debida sin duda a la gran cantidad de adherencias existentes en esa zona. Los estudios repetidos gastrointestinales no revelaron la presencia de estenosis gástrica, y por lo tanto las adherencias existentes en la región del antro no fueron tocadas. La principal obstrucción encontrada en la operación fué localizada en el íleon terminal. Por las malas condiciones del enfermo se aconsejaba un tratamiento quirúrgico corto.

Es evidente que aun encontrando la causa de una oclusión se debe hacer la revisión completa de todo el tubo digestivo, aún en el caso de que el estado del enfermo sea delicado. La observación cuidadosa efectuada durante el periódo de 3 y medio meses estableció en forma definitiva que la inanición es uno de los factores predisponentes a la pneumatosis. Aún más, puede concluirse que si se instala un regimen nutricional adecuado, puede controlarse el problema nutritivo y obtenerse una mejoría gradual del paciente.

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*Del Departamento de Cirugia del Hospital Memorial, Phoenix.

Presentado Al Decimo Anual Seminario De Ensenanza De La Academia Internacional De Proctologia En Abril De 1958 En La Journal of Proctology, Vol. 10, No. 3, Junio de 1959, y el No. 4 Ciudad De Mexico.

El trabajo original se presento y se publico en The American Agosto de 1959.

El autor agradece encarecidamente la amabilidad de la Academia Internacional de Proctologia en autorizar la publicacion de este abstracto original en Ingles y en Espanol comentarios y conclusiones.

Existe el hecho de que la pneumatosis puede desaparecer en forma espontanea yen nuestro caso, se presentó después de una resección segmentaria del ileon invaginado, sin tocar una estenosis gástrica existente, la que se localizó en forma accidental en la autopsia.

Refiriéndose a la etiologia de la pneumatosis intestinal y las teorías existentes, parece que existen factores mecánicos, nutricionales y químicos como determinantes en este cuadro patológico. La formación de quistes de gas es probablemente el resultado de una circulación linfática trastornada en todo el tubo digestivo. Los quistes gaseosos distendidos, morfológicamente, parecen formaciones linfáticas, y su contenido se deriva probablemente de una excesiva formación de bióxido de carbono.

Los cambios metabólicos y electrolíticos del aparato circulatorio son posiblemente responsables por los cambios osmóticos que se presentan en el tubo digestivo. Los cambios de presión en la red linfática del tubo digestivo en general, y la pared intestinal en particular, produce estancamiento linfático con edema, y la formación de un trasudado abdominal parecido al quimo. Esta condición es probablemente el resultado de una falla congestiva linfática producida por un aumento progresivo en la presión endolinfática, llegando al final a producir cuadros de hipertensión, parecido a la hipertensión pulmonar progresiva que produce una falla cardiaca congestiva.

Los síntomas mas comunes de importancia diagnóstica en la pneumatosis son: El pneumoperitoneo crónico, que es reportado con frecuencia y que en nuestro caso duró cuatro años. En el presente caso posiblemente existió el pneumoperitoneo cronico años antes de que fuera diagnosticado. Es evidente del estudio de la historia clínica de este enfermo y de otros, que la presencia de aire libre en el abdomen es uno de los síntomas diagnósticos precoces, antes de que aparezcan los signos clínicos. Es razonable pedir entonces que se busque la presencia de pneumoperitoneo aunque sea mínimo en los casos con trastornos intestinales indefinidos. La presencia de pneumoperitoneo sin shock y los demas síntomas alarmantes de una viscera hueca perforada, deben siempre hacernos pensar en pneumatosis. Las radiografías mostrando intestino en panal de abeja deben hacer sospechar la presencia de este padecimiento. La desaparición radiologica del pneumoperitoneo y los quistes fué confirmada en la segunda laparotomía, y debe considerarsele un metódo de confianza.

El caso presentado en este trabajo corrobora que se trata de un padecimiento crónico que puede continuar durante años. Se considera a la pneumatosis como un padecimento benigno, pero la posibilidad de una oclusión lo hacen más serio. El sitio donde se presentó la estrangulación de yeyuno con mesenterio torcido estaba libre de quistes de gas en la exploración de Marzo de 1957. Existe sin embargo la posibilidad de que existieran quistes gaseosos en la cara posterior del ligamento de Treitz o en la unión duodeno-yeyunal.

Siendo imposibles de localizar por la formación especial anatómica del igamento y funcionamiento de las visceras en ese lugar, la presencia de quistes gaseosos pudo producir interferencia circulatoria con el pedículo mesentérico yeyunal y por lo tanto con el yeyuno mismo, produciendo así el volvulus.

La primera oclusión aparente en Marzo de 1957 fué producida por un granuloma formado por quistes aglutinados, que se invaginó en la porción distal del intestino. La localización topográfica de la mayoría de los quistes de gas fué hecha en el borde antimesentérico, correspondiendo así a la distribución anatómica de los linfáticos.

El hallazgo invariable de células epiteliales forrando la pared de los quistes y la multiplicidad topográfica de las bulas, simulan sin lugar a duda la misma formación que los segmentos linfáticos. La presencia de ascitis de consistencia espumosa parecida a la glicerina, encontrada en el caso descrito fué observada también por otros investigadores, aunque ellos no hacían notar ni su consistencia ni lo espumoso del líquido.

RESUMEN

1. Se presenta una revisión de la literatura mundial sobre Pneumatosis Intestinorum Hominis, con un caso clínico. Se presenta rara vez en el hombre y es de origen desconocido.
2. Como resultado de esta condición patológica se forman quistes de gas en la serosa visceral del intestino y a traves de la mucosa. Se encuentra además un exudado aceitoso espumoso.
3. El padecimiento es crónico, de duración exageradamente larga, progresando lentamente, causando emaciación, invalidez y cambios en la personalidad. Los síntomas son de obstrucción intestinal crónica progresiva.
4. Se exploran las teorías etiológicas. Se formula una hipótesis sobre hipertensión linfática.
5. La resección segmental del ileum terminal invaginado, resultó util para contrarrestar la formación de quistes y para mejorar el estado general del paciente.
6. Tuvo que operarse en forma retardada tres meses mas tarde, por causa del enfermo, de un cuadro de estrangulación yeyunal, más allá de los límites de seguridad.
7. La autopsia mostró buenos resultados de la primera operación y reveló la estrangulación del yeyuno. Se hizo un diagnóstico de presunción de accidente cerebro-vascular, anterior o simultaneo al acto quirúrgico.

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Fourteen years ago, at the request of the late and beloved Dr. Frank J. Milloy, then secretary of the Association and editor of the Journal, I accepted the responsibility of publishing ARIZONA MEDICINE. With this issue I am turning it back to the Association.

As Dr. Milloy told me at the time, it was a pretty sorry publication. The medical content was good, of course, he saw to that, but as there was no business management the advertising support was scanty, local, and amounted to practically nothing. It was supposed to be a bi-monthly at that time, and it did come out occasionally, when the weather was favorable and the printers could find nothing else to do.

Dr. Milloy figured, correctly, that with his medical editorial know-how, combined with my business know-how, working closely together, we could develop ARIZONA MEDICINE into a first-class publication that would be a credit to the profession.

And that is exactly what happened. All down through the years Dr. Milloy, and his successor as editor, Dr. R. Lee Foster, worked closely with me in building up this publication, until it came to be recognized as one of the finest medical journals published in the United States. It has repeatedly been given high place by national organizations, and the top place of "First In General Excellence" among Arizona magazines.

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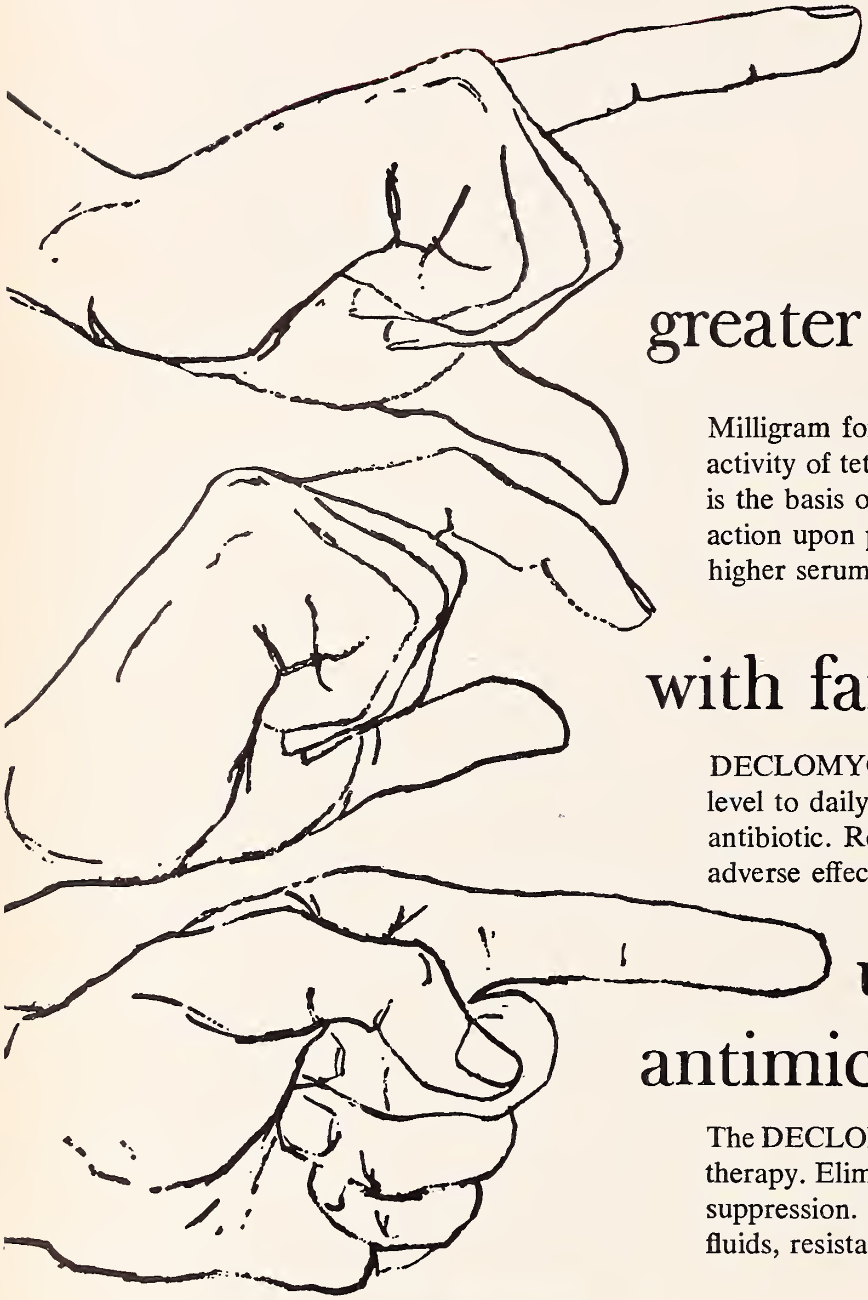
How much time and money I spent, how many national and regional conventions I attended, how many trips for conferences with the agencies—how much and how many I could dig out of our books—but the point is that I got the job done because I know how, and because for many years I had the complete cooperation of the editors and the publication committees.

Together we developed a splendid publication, with sufficient income to pay all the costs of publication, all the costs of securing the business, and all of the costs of supplying the magazine to your membership, the membership of your auxiliary, and world-wide exchange with other medical organizations and publications.

All this changed when the present editor took over. He has never called at the publication office, never offered to cooperate with me in getting out the best possible publication. He has never attended meetings, never called any meetings of the Publication Committee, and his scanty knowledge of the publication field has been reflected in material sent me to fill space in the magazine. I have been reluctantly compelled, when asked about the useless re-publication in ARIZONA MEDICINE, of material every doctor had already seen in his national publications, to confess that I had no opportunity to confer with the editorial staff, or to make or receive constructive suggestions. Under such circumstances it was inevitable that the quality of the publication suffered.

Meantime a member of your State Association staff seems to have been promoting himself and his ideas—although he has had no training or experience, or even contacts, in the publication field, and knows nothing whatever about advertising—and, incidentally, gave your Journal staff little support in our efforts to concentrate National Advertising support behind your state Journal.

(Continued on Page 814)



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C. Thomas Read, M.D. ....Chest Surgery
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L. D. Sprague, M.D. ....Medical Economics
Alvin L. Swenson, M.D. ....Orthopedics
Roger F. White, M.D. ....Pediatrics
(The opinions expressed in the original contributions do not necessarily express the opinion of the Editorial Board.)

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The Editor is always ready, willing, and happy to help in any way possible.

(The Opinions expressed in original contributions do not necessarily express the opinion of the Editorial Board.)

A REPORT TO THE MEMBERSHIP FROM THE PRESIDENT

As PRESIDENT of your association, I presume you might ask me to review those activities that might affect each one of you personally. One pertinent question seems to be a recurrent theme. It can be stated as follows: "What is the state medical association doing for me that will justify the dues I am compelled to pay?" Ordinarily, the answer to this often becomes detailed and may prove unsatisfactory. I have, however, prepared myself this time by having Mr. Robert Carpenter and Mr. Paul Boykin compose a five page letter. I have it in hand at this time. I am ready to go over it in detail with you any time you so desire. I know that one time or another in the course of our medical life in our respective communities, each one of us feels that the state association dues are too high and could be reduced if only the powers that be would disengage their big, fat derrieres from the security of the administrative chair and get the job done. I also am positive beyond a shadow of a doubt that these ideas change as one pursues them from the land of imagination into the land of reality. As president of the Maricopa County Medical Society in 1951, one of my pet projects was to find out just what the state association was doing with our money. There is a letter in the file of the state medical association office wherein I demanded detailed and specific accounting, not only for finances, but for activities. This request received prompt attention as well as an invitation to meet and discuss problems of mutual interest and importance to both organizations. Thus began the education of the belligerent neophyte. You, too, can be educated if you keep your mind open and your arguments logical.

The crux of this situation, and one we must all recognize, is the fact that your state organization is dedicated to two prime concepts: One, the preservation of the practice of medicine as you now know it. Two: The maintenance of the dignity and hard-earned reputation of each physician as an individual. Much activity and no small amount of money is necessary to live up to these concepts. Your fellow colleagues labor long and hard to see these things acomplished for you. I do it, and your colleague does it willingly because we know that your turn is coming, just as our turn followed our esteemed predecessors'. It requires many hours of committee work plus individual effort, and this calls for a certain amount of dedication. If there arises in your mind a resentment or a disagreement regarding what the state association does or does not do, please stop growling in your beard and do something about it. Put your fighting togs on and have at it. I would caution you, however, to come to the wars well prepared. Your pet project or your brilliant ideas may have been reviewed and found wanting, or already discussed and discarded. I would also like to predict that for every constructive criticism which is implemented by a man of good intentions, on that day is born a new member of the "Old Guard" of our association. Once you determine to find the facts regarding your state association, you are destined for some pleasant surprises. You make friends among your colleagues outside of your everyday environment. The work is pleasant, though sometimes tedious. Of paramount importance, you finally and forever see that the state association backstops each and every physician in maintaining and preserving the high ideals of our distinguished profession. One of the most rewarding surprises is to find the unusual efficiency and co-operation of the executive secretary and his management of the central office of the association. We are indeed fortunate to have in our employ Mr. Robert Carpenter and Mr. Paul Boykin. I will not elaborate, but I invite you to keep this in mind as you progress in any inquiry you care to make. Sooner or later you will give a loud amen to the opinion just expressed.

Special Mention

I have one topic that deserves a special mention. Your respective county societies have been active in programs of better public relations. The main objective has been to carry this to the point of guaranteeing our patients medical care second to none. We have been of the opinion that misunderstandings, and especially unwarranted criticisms of doctors could be nipped in a bud with proper and early attack on the problem at its source. I am not going to discuss the progress of these programs, as it properly belongs in the reports of your respective county presidents. I mention it only as a background in order to elaborate on a new and nationwide concern regarding our inter-professional problems. The American Medical Association is concerned. We in Arizona have been more cognizant each year of the necessity for better discipline among the members of our profession. You, of course, are aware that the grievance committee or the board of medical examiners as a rule can adequately handle any problems that arise regarding questionable practice by one of your colleagues. This is well and good, but what do we do about one of our fellow practitioners who is not a member of our medical association? The answer is that we do nothing. If we sit by with folded impotent hands, who carries the ball? The board of medical examiners is specifically charged with this responsibility, say you. The board of medical examiners does a yeoman-like job, make no mistake about that, but in certain instances they cannot operate in an effective manner. This hiatus must be bridged. One solution has presumably been to admit a questionable character to membership in the respective county associations in order "to make a good boy" of him. To this concept I am in entire and complete disagreement. A bad apple in a barrel of good apples spoils the good ones, but does not alter the putrefaction or stink of the bad one. Fortunately, we do not have too many bad apples to worry about. I do believe, however, that admission of a member to an organization such as ours demands thorough investigation. If a candidate has a preceding bad reputation, it should be discovered and the facts made an integral part of his record. The board of censors of each county society is the screening body for new applicants. In my term on the board of censors I am unhappy to have to confess that the scrutiny of the applicant was often cursory. I also remember the sticky problems we occasionally had. I recall very distinctly how we got the monkey off our backs by passing the buck to the county society as a whole. I now believe that this is not proper. If a bad apple is recognized by the board of censors, his admission or rejection should not be foisted off on the society as a group simply as a buck-pasisng maneuver. If, however, the board of censors can justifiably persist in this attitude, then they must also be prepared to present the picture in its true perspective so that the members may vote intelligently. This often creates quite a hassle that could have been settled quietly at the board of censors level. Please keep in mind that the "temporary" or term membership at the county level was not set up with the original intent to make good apples out of bad ones. This mechanism was instituted in order to be able to find the occasional individual who by some happenstance might make the first hurdle into temporary membership smelling like a rose. If he later bloomed in a decadent splendor of undesirable, unethical conduct, he could be eliminated from consideration for permanent membership. If we do reject an applicant early in the game at the board of censors level, he presumably is beyond control. What are we to do if this individual then proceeds to practice a type of medicine we all recognize as incompetent, dishonest, or unethical? Some one or a few of us could rise in all of our individual or collective wrath and take care of the problem. The only practical disadvantage of this, however, is that he who leads such a punitive action often finds himself out on a limb. Soon he feels very sorry for old Number One. Some lawyer with a sense of humor may inform this Don Quixote that activities of a punitive nature may be subjected to legal action by the individual in question. At this stage, old Number One is very envious of the Arab of antiquity who quietly folded his tent and silently stole away. I firmly believe more of us would be willing to take on these disciplinary problems if we knew we had solid backing in the form of some law that would fortify our efforts and prevent us from being put upon by legal action, threatened or real. The solution to this problem may be found in the statutes of the State of Washington. A disciplinary board has been set up and legislative action has resulted in a law which puts teeth and protection into the actions of individuals who would safeguard the public from unscrupulous practitioners. The American Medical Association is looking into this subject. You may have noted mention of it in the Journal of the American Medical Association. We will hear more about it in the future. In the meantime, let us all call a spade a spade, and accept as members only those fully deserving of the honor.

Medical Education

I would like to make mention of our effort at the last state association meeting to present for you a full day session on medical education. The September and October issues of your state journal, *Arizona Medicine,* contained the papers presented at Chandler last May. In November all of these papers were made available to you in booklet form. It should give all of you a handy reference to a well rounded discussion on medical education. I trust you read the papers closely and digest them well.

The importance of medical education to the State of Arizona has resulted in the appointment of a Committee on Careers by your state organization. I will not bore you with my thoughts on the value of this committee. The November issue of *Arizona Medicine* has an article entitled, "Medical Manpower for Arizona." This is an effort to bring to you a summary of where we are now in medical education in Arizona, and how we are going to proceed in the future to obtain sufficient medical manpower for our state.

I now have a pleasant duty to perform in calling to your attention the fact that the Arizona Medical Association has had the honor of national recognition on at least two counts in the past 12 months, and is looking forward to additional recognition in the near future.

Dr. Jess Hamer has just completed his term as vice president of the American Medical Association. We are proud of this well deserved honor being bestowed on one of our members and we congratulate him.

Dr. Harold Kohl has brought the name of the Arizona Medical Association before the eyes of our colleagues throughout the nation. Dr. Kohl originated the plan for financial assistance to our nation's medical schools now known officially as "The Arizona Plan." In brief, it is a method of directing gifts from the pharmaceutical association into the funds for medical education of the American Medical Education Foundation. Instead of sending you a gift at Christmas time, the pharmacists have been convinced that you and I would be much happier if this gift was sent in the form of money to help our medical schools. This idea of Dr. Kohl's promises to be of tremendous financial help to our medical schools, and emphasizes again the interest the Arizona Medical Association has in medical education. Our thanks and appreciation to Dr. Kohl.

It is with some interest that I have watched the development of "The Pima Plan" and its method of handling the medico-legal malpractice problem. The Pima County Medical Society has had this particular panel in operation now for approximately two years and the experience is quite encouraging. This plan has been discussed before a number of medical groups, and is meeting with favor not only in Arizona but in other parts of the country. Our congratulations to the Pima County Medical Society and their friends in the legal profession who have brought about this very commendable innovation.

Finally, I would like to call attention to the fact that our journal, *Arizona Medicine,* is to be published by the state association beginning Jan. 1, 1960. The central office will handle the business and advertising aspects of the operation. Dr. Darwin Neubauer, in conjunction with the publishing committee and the central office staff, have been presented with many problems and much time and effort has been expended in order to make the transition proceed smoothly. We are looking forward to the "new" *Arizona Medicine Journal* with expectation and unbounded confidence that it will be outstanding and a journal you will be proud to receive. We are even optimistic enough to hope that revenues will be forthcoming that will assist in the ever increasing expenditures necessary to conduct activities on the state level.

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THE MILWAUKEE Labor Press recently stated, ". . . many doctors have made an exact science out of squeezing the last nickel from their patient." This is an example of how we physicians are being harassed, by many sources, about our "poor public relations." Many attempts have been made individually, and as organized medicine, to study the charges and to correct our deficiencies, but the bombardment continues. We should do three things:

First, we should ascertain wherein we are wrong and then take firm steps to permanently correct our errors.

Second, we should go all out, by public education, to prove that many of the accusations are wilthout merit.

Third, we should inventory our doings, to ferret out that which might further kindle the public's ill-will. It is onerous that this ill-will has been kindled to a degree which frustrates the honorable physician.

A few years ago, a sardonic joke among the physicians of Arizona was that a group of doctors had a cash register prominently displayed, so that it was the first thing a patient would see on entering the office. I am not sure that such a mercenary device is being used today, but I do know that tactics equally as repulsive are being employed.

There is one thing which has not been widely publicized as yet, namely, the display of signs, by some doctors, about the payment of bills. We should consider the full impact of such signs as: *All Services Cash – All Services Cash Unless Otherwise Arranged – Please Pay Cashier – Please Make Arrangements for Payments at the Desk – Member of .... Credit Bureau.*

These signs, or variants of the same, are being displayed by some physicians. Thus the $$ sign becomes mixed with the patient's desire for relief from some affliction, even before he has been extended the "courtesy" of registering, or meeting the doctor.

When Business Isn't Business

The registration continues the same affront, in that the questions include a statement as to the name of the bank in which the patient keeps his checking account, and the name of the insurance company (if any) which might be expected to pay the bill. Some of our physicians are more subtle and do finish their examination before they hand the patient a slip of paper which reads . . . *"Please pay $$$ to the girl at the desk."*

Our "good" business advisors have told us that it is good business to do everything possible to collect all the $$ we can, by most any method which might be successful at the moment. Business is business, but what we have to decide is whether we physicians are primarily interested in our profession as a profession, or in our profession as a business.

If we act to much like we are engaged in a business, then we must expect to have even less respect from the public than they extend to business men, because we wear the cloak of a profession and hence we are guilty of duplicity.

Have we forgotten the Golden Rule? When a patient selects his doctor and submits to his advice and treatment, he must have implicit confidence, because it is his life and not material things which he has entrusted to the doctor. For anyone who trusts us with his intimate secrets and his life, it would indeed seem that the least we could do to reciprocate would be to trust them, for a little while, for a few $$$$.

The prominent display of signs, which infer that all people are deadbeats, merely incites a desire in thinking persons to help prove that your insinuations are correct. To do so, they just make the $$$ harder to collect. About 2 or 3 per cent of all people are deadbeats and considerable more are just borderline deadbeats, who are looking for any affront which might justify their own desire not to pay $$$$. It is only the deadbeat and the moron who are not offended by the doctor who puts the $$$$ sign in first place, ahead of professional service.

If we doctors spend ample time in giving quality medical care, in such a fashion that our patients are convinced that we have done our all, they will be much more apt to show their gratitude with a check.

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SEARLE

Topics of Current Medical Interest

THE ARIZONA MEDICAL ASSOCIATION, INC.

PROFESSIONAL COMMITTEE

MEETING OF the professional committee of The Arizona Medical Association, Inc., August 9, 1959.

Present: Drs. Farness, Orin J., Gregory, T. Richard, Johns, Richard B., Kinkade, Joseph M., Leonard, Robert B., Schwartzmann, John R., Chairman; Stapley, Lorel A., Secretary; Wormley, Lowell C.

Staff: Boykin, Paul R., Assistant Executive Secretary; Carpenter, Robert, Executive Secretary.

SUBCOMMITTEE ORGANIZATION

With the adoption, by the house of delegates of the association of a completely modified and amended by-laws, it became necessary to revise and in some instances consolidate the subcommittee structure and chairmanship assignments of the professional committee. Following is listed the classifications and appointments for the fiscal year 1959-60:

Aging..............Lowell C. Wormley, M.D.

Cancer............Robert B. Leonard, M.D.

Civil Defense & Safety (To Be announced).

Note: Need for appointment of an additional member to the professional committee was determined and it was directed that the president be so informed. The name of John W. Kennedy, M.D. (Phoenix) was suggested.

It was further determined that matters dealing with air pollution shall be considered a part of the scope of activity of this subcommittee.

Crippled Children.Thomas H. Taber, Jr. M.D.

General Medicine......Orin J. Farness, M.D.

Note: It was determined that matters dealing with poisoning control and tuberculosis shall be considered a part of the scope of activity of this subcommittee.

Hospital & Nursing Problems—Joseph M. Kinkade, M.D.

Note: It was determined that matters dealing with hard of hearing shall be considered a part of the scope of activity of this subcommittee.

Maternal & Child Health — Richard B. Johns, M.D.

Mental Diseases—T. Richard Gregory, M.D.

Rehabilitation—Ray Fife, M.D.

Venereal Diseases—Laddie L. Stolfa, M.D.

It was determined to eliminate the subcommittee on seminars; likewise, it was determined the present need for subcommittees on blood bank (this to come under the medical economics committee) and medicare adjudication (this also to come under the medical economics committee) is not indicated.

TRANSFER OF PREPAID MEDICAL SERVICES

It was again reported there had been no further response from the pathologists referable to previous discussions in the matter of suggested transfer of prepaid medical services from Blue Cross to Blue Shield.

It was moved, seconded and unanimously carried, since there has been no further activity in this regard, that the matter be dropped without reaching any decisions; that the pathology group be so informed; and should the pathologists wish this professional committee to again consider its problem at some future date, that they so advise after they have prepared for it.

SUBCOMMITTEE REPORTS

Aging:

Doctor Wormley reported that, with recent additions, his subcommittee on aging will comprise the following membership, listing the titles of subjects or fields each is to become conversant with, in association with the problem of aging from the medical viewpoint:

Drs.: Counseller, Virgil (Phoenix)—"Utilization of Professional Skills of Older Persons"; Eckstein, Albert (Phoenix)—"Nursing Homes and the Medical Care Program as it Exists Today for the Older Person"; Gotthelf, Edward J. (Tucson)—"Specific Medical Problems of Aging"; Hamer, Jesse D. (Phoenix)—"Current Activity in the Field of Aging"; Holsey, William F. (Tucson)—"Surgical Problems of Older Individuals"; Jarrett, Paul B. (Phoenix)—"The Hazards of Accidents in the Older Person"; Joseph, Samuel R. (Phoenix)—"Hospitalization Insurance Problems for the Aged"; Schell, Donald E. (Tucson) — "Home Programs in Anticipation of Retirement and the Financial Responsibility of the Family and the State for the Senior Citizen"; Smelker, Van A. (Tucson)—"The Role of National Welfare and Foundations in the Directions of the Care of the Aged and Aging"; Wick, Samuel (Phoenix)—"A Program for the Continued Mental Activity and Like Interest in Older People."

Doctor Wormley then proceeded to abstract items of special interest and activity since the last meeting of this committee, including, but not limited to: (a) national conference of the Joint Council to Improve the Health Care of the Aged held in Washington, D. C.; (b) National Leadership Training Institute held in Ann Arbor, Mich. (each attended by Doctor Hamer, representing the association, who is to be invited to attend the next meeting of this committee and report); (c) HR 4700 (Forand bill) hearings before the ways and means committee of the U. S. House of Representatives in Washington, D. C., the week of July 12, Doctor Hamer in attendance; (d) voluntary health insurance plans for individuals over the age of 65 being developed by private insurance carriers, including Blue Cross-Blue Shield; (e) continuing need for organization of county medical society committees in the field of aging; (f) statistical reports of the Rhode Island Medical Society, and the Health Insurance Association, relating to progress in the field of care for the aged; (g) AMA field service report on the activities of the senate McNamara committee to study the problems of the aged and contemplated survey in selected key cities.

Discussion ensued with emphasis on the established philosophy that we will learn all we can; reasonably assist and co-operate, but hold unbridled enthusiasm to the point where we see our way clear to justify pursuing a course of action; reach our own decisions based on the merits; continue encouragement among private insurance carriers, Blue Cross and Blue Shield, to extend coverage to include older groups, 65 and over; consider the needs of the aged who are bedridden or disabled, and who could be cared for outside the hospital in nursing or rest homes, or in the home itself; study the possibilities of vocational rehabilitation, providing work for those capable thereof — thus improving the health and mental attitudes of the aged; and oppose the philosophy of the Forand measure.

It was moved, seconded and unanimously carried that the professional committee, after extensive study and evaluation of the provisions of HR 4700, 86th congress, more frequently referred to as the Forand bill (which amends the Social Security Act to provide hospital, surgical and nursing home treatment for eligible beneficiaries, principally those over 65 years of age) and examination of the facts, strongly recommends to the board of directors that this association continue actively its opposition to this proposed measure as an impractical and impossible solution to the problems of the aging; and that the congressional delegation representing this state be adequately so informed.

It was moved, seconded and unanimously carried, after careful consideration of the steady increase in acceptance by medical societies thorughout the country (now totalling 25 out of the 48 state societies) of the theory of "voluntary insurance" as a means toward meeting at least some of the health needs of the aged, and inasmuch as the professional committee feels that it is a fair and equitable way of financing the hospital and medical care of the older individuals, that it be the recommendation of this committee that the state association continue acceptance of and further encourage the development and/or extension of voluntary private and Blue Cross-Blue Shield health insurance programs to include individuals 65 years of age and over, even to the extent of providing coverage for rest home or nursing home care as well as for care in the home itself.

It was moved, seconded and unanimously carried that the professional committee reiterate its continuing philosophy of conservation in approaching the problems of the aging, as previously declared and presented to the board of directors.

Air Pollution:

No report; however, hereafter, this activity will be combined with the subcommittee on civil defense and safety.

Cancer:

The Arizona Academy of General Practice reported that requirements for Category 1 credit for any seminar, symposium, or medical meeting include: (1) it must be an Arizona Academy of General Practice co-sponsored meeting; (2) there must be at least one member of the AAGP active on the program committee; and (3) application for Category 1 credit must be made directly to the secretary of AAGP, who will institute the necessary papers for formal approval.

The Arizona Division of the American Cancer Society requests approval of this committee of its annual cancer seminar to be held at the Arizona Biltmore, Phoenix, Jan. 14, 15 and 16, 1960. Doctor Leonard further stated that there would be no invitations extended to doctors of osteopathy to attend the siminar.

It was moved, seconded and unanimously carried that this professional committee recommend to the board of directors and urge the association's co-sponsorship of the eighth annual cancer seminar to be held at the Arizona Biltmore, Phoenix, Jan. 14, 15 and 16, 1960, with the assurance that such association sponsorship does not require any financial obligation.

For the information of the committee, Doctor Leonard presented for review a form of report to be used by the Federated Business and Professional Women's Clubs in association with its contest program to encourage members to seek a general physical examination by their individual physicians as a preventive measure against cancer. This report form has been developed for the use and convenience of the physician, the club receiving only that portion, signed by the physician, to the effect that the individual has received an examination, and without further detail.

Status of the proposed tumor registry was also reviewed by Doctor Leonard, following defeat of enactment of a law during the last state legislative session which would have required such reporting. The required use of names was the principal objection. This association subsequently withdrew its support and urged the cancer society to give continued study to the possibility of achieving the objective through other means or method.

Civil Defense:

This subcommittee on civil defense and safety (combined) will be organized and a report will be expected at the next meeting.

Crippled Children:

In the absence of Doctor Thomas Taber Jr., who will head this subcommittee, no report was presented. Doctor Schwartzmann stated that there had been and will be continuing activity in correlating and tabulating facilities that are presentely available for the care of crippled children and on completion it will be adequately publicized.

General Medicine:

Doctor Farness reviewed the report on osteopathy, prepared by Doctor Jesse D. Hamer, Arizona (association) delegate to AMA, the outcome of deliberations of the AMA House of Delegates in annual meeting recently concluded in Atlantic City. The following policy in regard to the relations between doctors of medicine and osteopaths was adopted:

"All voluntary professional associations between doctors of medicine and those who practice a system of healing not based on scientific principles are unethical.

"Enactment of medical practice acts, requiring all who practice as physicians and surgeons to meet the same qualifications, take the same examinations and graduate from schools approved by the same agency should be encouraged by the constituent associations.

"It shall not be considered contrary to the principles of medical ethics for doctors of medicine to teach students in an osteopathic college which is in process of being converted into an approved medical school under the supervision of the Council on Medical Education and Hospitals of the American Medical Association.

"That a liaison committee be appointed by the board of trustees of the American Medical Association to meet with representatives of the American Osteopathic Association, if mutually agreeable, to consider problems of common concern including inter-professional relations on a national level."

Also reviewed was a medical opinion of a pediatrician and an allergist concerning benefit of Arizona climate in the treatment of infectious asthma in children based on experience and records of the Asthmatic Foundation in Tucson, which was developed to satisfy inquiry received from Robert S. Causey, M.D. of Marietta, Ga.

Another matter of long standing and controversy discussed was the treatment of scorpion sting by Herbert L. Stahnke, Ph.D., director of Poisonous Animals Research Laboratory, Arizona State University, Tempe, and application pending for a federal (Division of Biologics Standards, National Institutes of Helath, HEW) license for the manufacture and sale of scorpion anti-venom. Reference was made to a recently published article appearing in *Arizona Medicine*, July issue, by Henry P. Limbacher, M.D. (and Charles H. Lowe Jr., Ph.D.) entitled: "The Treatment of Poisonous Bites and Stings," pointing out possible damage to tissue in certain cases caused by drastic tissue refrigeration, etc. Interest in and work of Frederick A. Shannon, M.D. of Wickenburg in the matter of poisonous bites was likewise referred to and obvious need

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for authentic information dealing with the therapeutic aspects of medical management indicated. It was directed that Doctor Farness, as chairman of this subcommittee on general medicine, undertake the project of correlating all available material and experiences in Arizona, referable to the treatment of poisonous bites, confer with both Doctors Limbacher and Shannon and any others, and formulate a report that will be both informative and useful to the profession and other interested parties in this regard.

Hard of Hearing:

No report. This activity will hereafter be included in the scope of operations of the subcommittee on hospital and nursing problems under Doctor Kinkade.

Hospital and Nursing Problems:

It was determined that inasmuch as Doctor Norman A. Ross, former chairman of this subcommittee, is no longer a member of the professional committee, Doctor Kinkade, now chairman, will be part of and assist the special committee previously appointed, including Doctor Gregory, as chairman, and Doctor Leonard, in the matter of inspection of the North Mountain Hospital, Phoenix.

Maternal and Child Health:

Doctor Schwartzman reported that possibly the most recent activity in this field has been the polio immunization drive supported by this committee and finally the National Foundation. With the co-operation of the county societies, progress is being made.

Doctor Johns called attention to the previous action of the house of delegates of this association in meeting held May 2, 1959, at which time a resolution was adopted dealing with the treatment of the eyes of the newborn, requesting the Arizona State Department of Health to approve a list of additional agents other than silver nitrate for the prevention of gonorrheal ophthalmia of the newborn, after consultation with recognized medical authorities on the subject. Doctor Salsbury reported that about two years ago, effort was made to obtain an expression of opinion from pediatricians and obstetricians; however, about a year ago the pediatricians in this area voted against the use of anything except silver nitrate, recommended also by the American Academy of Pediatrics. The Graham County Medical Society recently approved that an additional list of drugs other than silver nitrate be published. Obviously, there is a difference of opinion and any change now would only confuse the issue. There appears to be no serious complications resulting from the use of silver nitrate, and yet there are problems involved in the use of other drugs i.e., development of sensitivities, producing antibiotic resistance in the newborn in nurseries, etc. Further study and recommended action will be taken up at the next meeting.

Mental Diseases:

Doctor Gregory recommended favorable consideration be given the proposed WICHE postgraduate clinical psychiatry regional program for non-psychiatric physicians. While there are differences of opinion among certain of the psychiatrists as to the value of such program, the board of directors be informed that the committee feels the proposal has sufficient merit to approve of a pilot program to be undertaken in co-operation therewith; further, it is understood that such participation will entail no financial obligation on the part of the association. In view of the fact that the board is not scheduled soon to meet, it was further requested that the president, Doctor Melick, be informed of this action, inasmuch as time appears to be of the essence in setting up such a program, should it be approved by the board.

The sixth annual conference on mental health, sponsored by the American Medical Association's Council on Mental Health, was held in Chicago at the Drake, Nov. 20 and 21, 1959. Doctor Gregory attended this meeting representing the association. Doctor Gregory is preparing a report for publication in *Arizona Medicine* on those aspects of the general meeting which will be of particular interest to the membership at large, and in addition, inform the psychiatrists of this state regarding those portions of primary interest to its specialty field.

Poisoning Control:

No report. Such activity will be absorbed by the subcommittee on general medicine.

Rehabilitation:

In the absence of Doctor Fife, no report was presented. Doctor Schwartzmann indicated that he anticipated activity in this field will assume major proportions in the months ahead, even surpassing those in the field of aging and the aged. He urged each member to be alert to the problem and render every assistance to Doctor Fife, subcommittee chairman, who already has become involved therein.

Safety:

"Safety" will be combined and hereafter included in the scope of operation of the newly activated subcommittee on civil defense and safety.

Seminars:

The subcommittee on seminars will be eliminated for the time being, a member of this professional committee having been appointed to serve on the scientific assembly committee whose interests are similar.

Tuberculosis:

This activity hereafter will be absorbed by the subcommittee on general medicine; however, Doctor Farness, former subcommittee chairman, reported on the recently concluded tuberculosis nursing conference, with emphasis on thoracic surgery, held Aug. 3 through 7, 1959, at the University of Arizona, Tucson, providing nurse training on the university level. The participants were outstanding, the program well conducted, and it was recommended and ordered that a letter be prepared and forwarded to Mrs. Pearl Parvin Coulter, Director of the School of Nursing, U. of A., expressing appreciation for her efforts in conducting the seminar.

Venereal Diseases:

No report.

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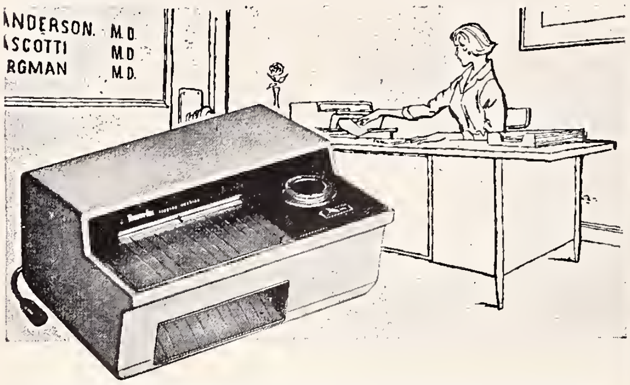
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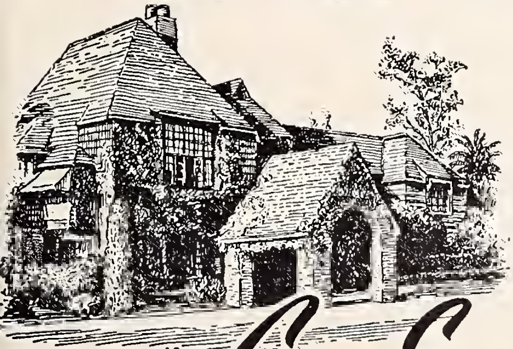

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WRITE FOR OUR ILLUSTRATED BOOKLET

(Continued from Page 797)

Long before your last State Meeting your state secretary informed me it would be useless to expect a renewal of our publishing contract, as the Journal would be handled out of the editor's Tucson office, through the University of Arizona press bureau.

I am not in the least disturbed that this hired help has persuaded a few doctors and a few professors at the University of Arizona to "take a whirl" at publishing ARIZONA MEDICINE. I just feel sorry about what will undoubtedly happen to the beautiful publication to which I and my staff have devoted so much time, money, work, and know how.

Miss Hilda Wax, who has been my assistant for 11 years, Mr. Julian De Vries, my proof reader and advisor, Mr. A LaBenz, commerical artist who has been doing my art work for 10 years, Mr. Jackson, in charge of National Advertising in Chicago.

I have a shrewd suspicion that the experimenting of the new staff will be interesting to all observers, probably diverting, and possibly even amusing. Other similar experiments have been observed, where there was a similar lack of experience and training, to have been quite generally unfortunate.

(Continued on Page 816)

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(Continued from Page 814)

Meantime I shall carry on my business of "official publications," as I have been doing for twenty years; and it might even happen, at some future time, that I might again have the opportunity to be of service to the medical profession of Arizona.

To the many members of your Association who have worked with me in the tremendous development of ARIZONA MEDICINE while under my management, I extend my sincere thanks and highest personal regards, and the Season's Greetings.

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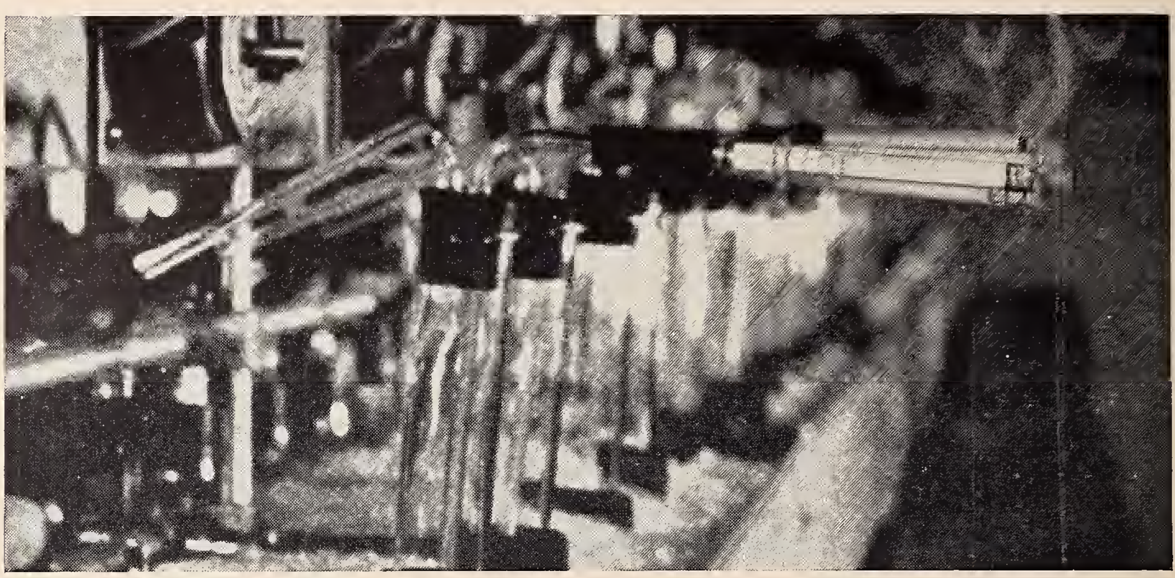

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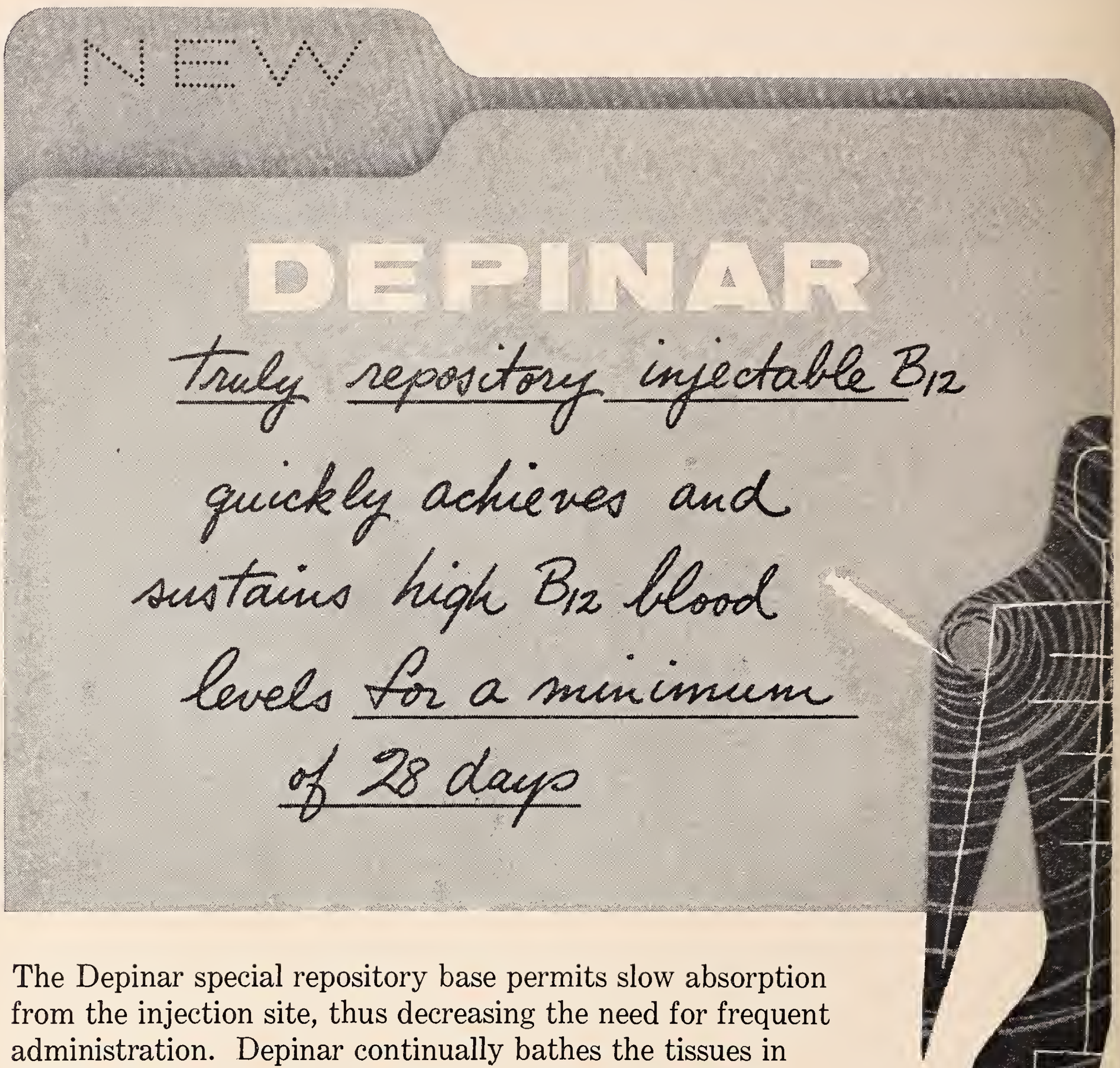

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*Thompson, R. E., and Hecht, R. A.: Am. J. Clin. Nutrition 7:311-317 (May-June) 1959.

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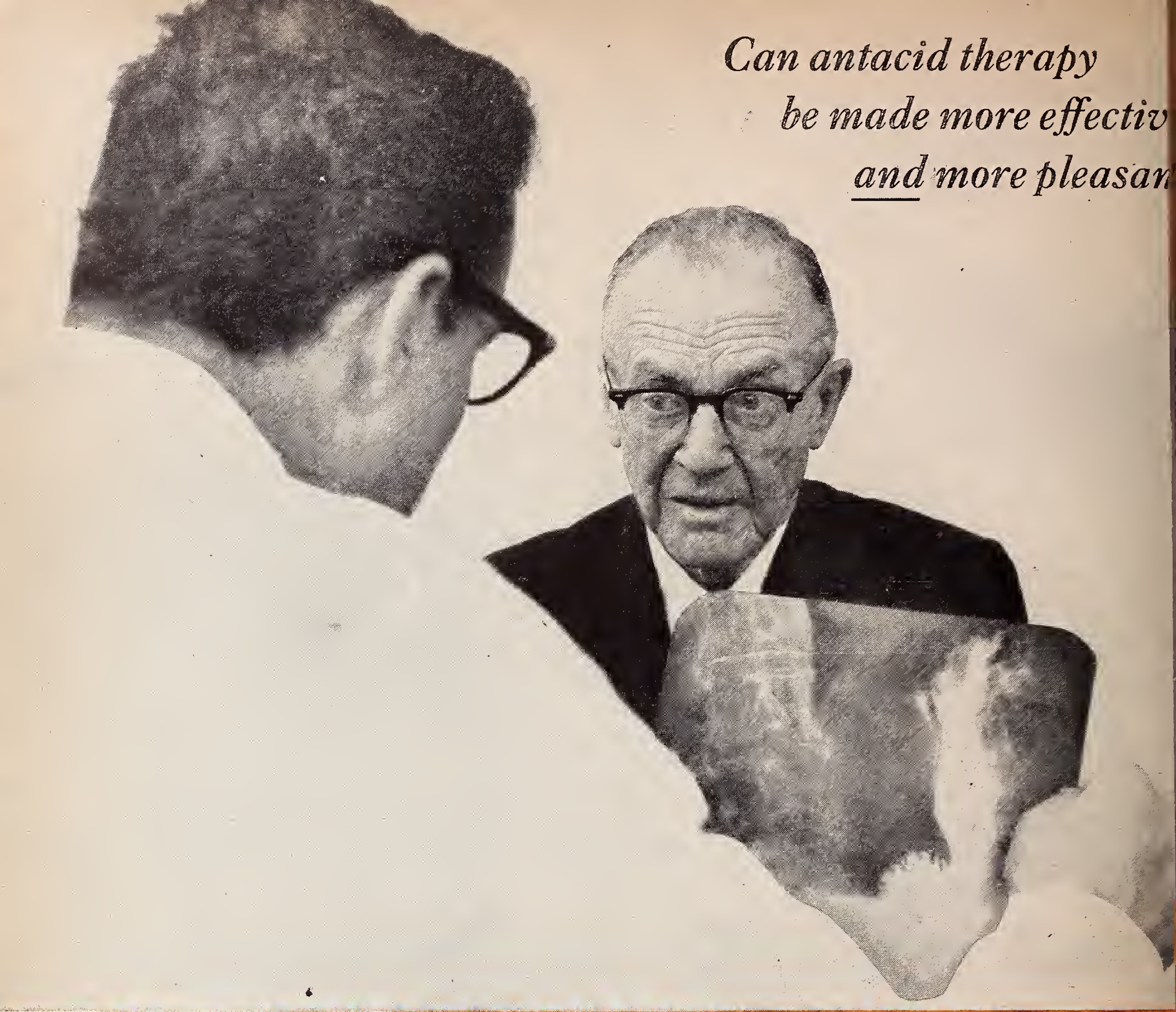

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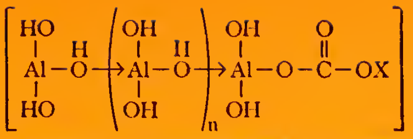

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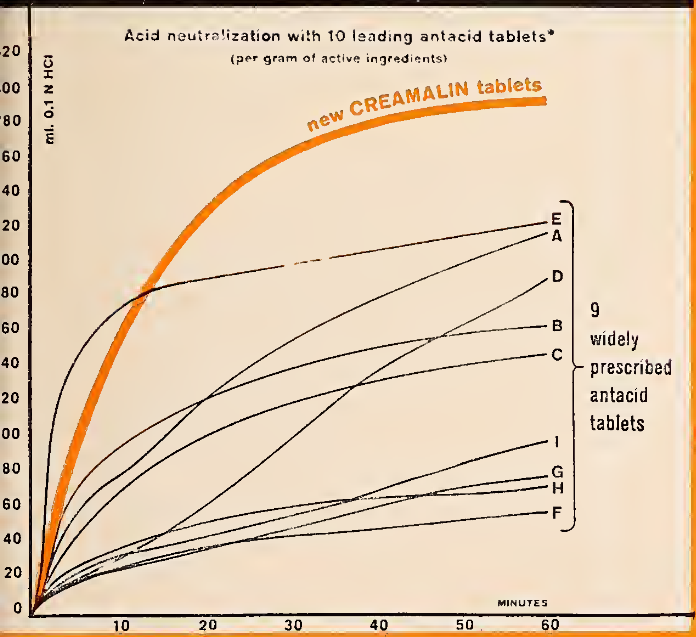

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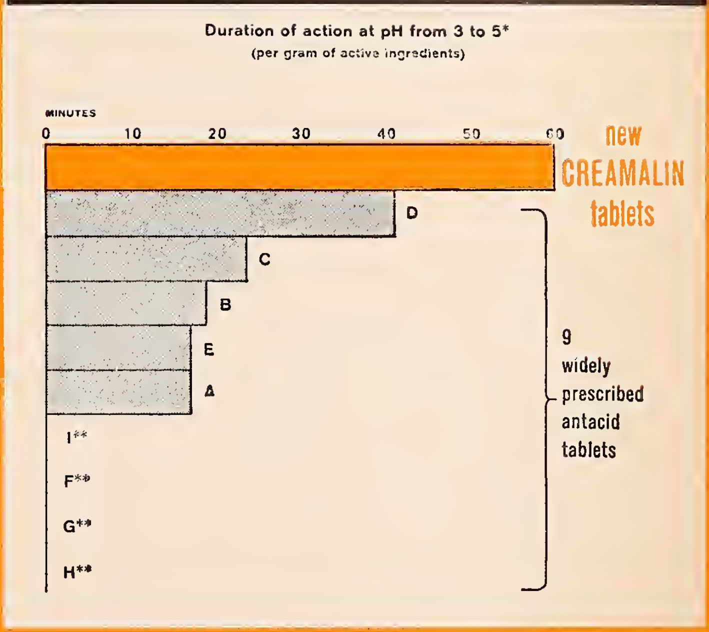

*Hinkel, E. T., Jr., Fisher, M. P. and Tainter, M. L.: A new highly reactive aluminum hydroxide complex for gastric hyperacidity. To be published.
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dedicated to the health of Arizona's people

make them measure up

Incremin® with iron Syrup

Lysine-Vitamins Lederle

help restore the normal blood picture—iron as ferric pyrophosphate to restore or maintain normal hemoglobin.

boost appetite and energy—vitamins . . . B_1, B_6 and B_{12}.

upgrade low-grade protein—cereals and other low protein favorites of children, upgraded by l-Lysine, work with meat and other top protein to build stronger bodies.

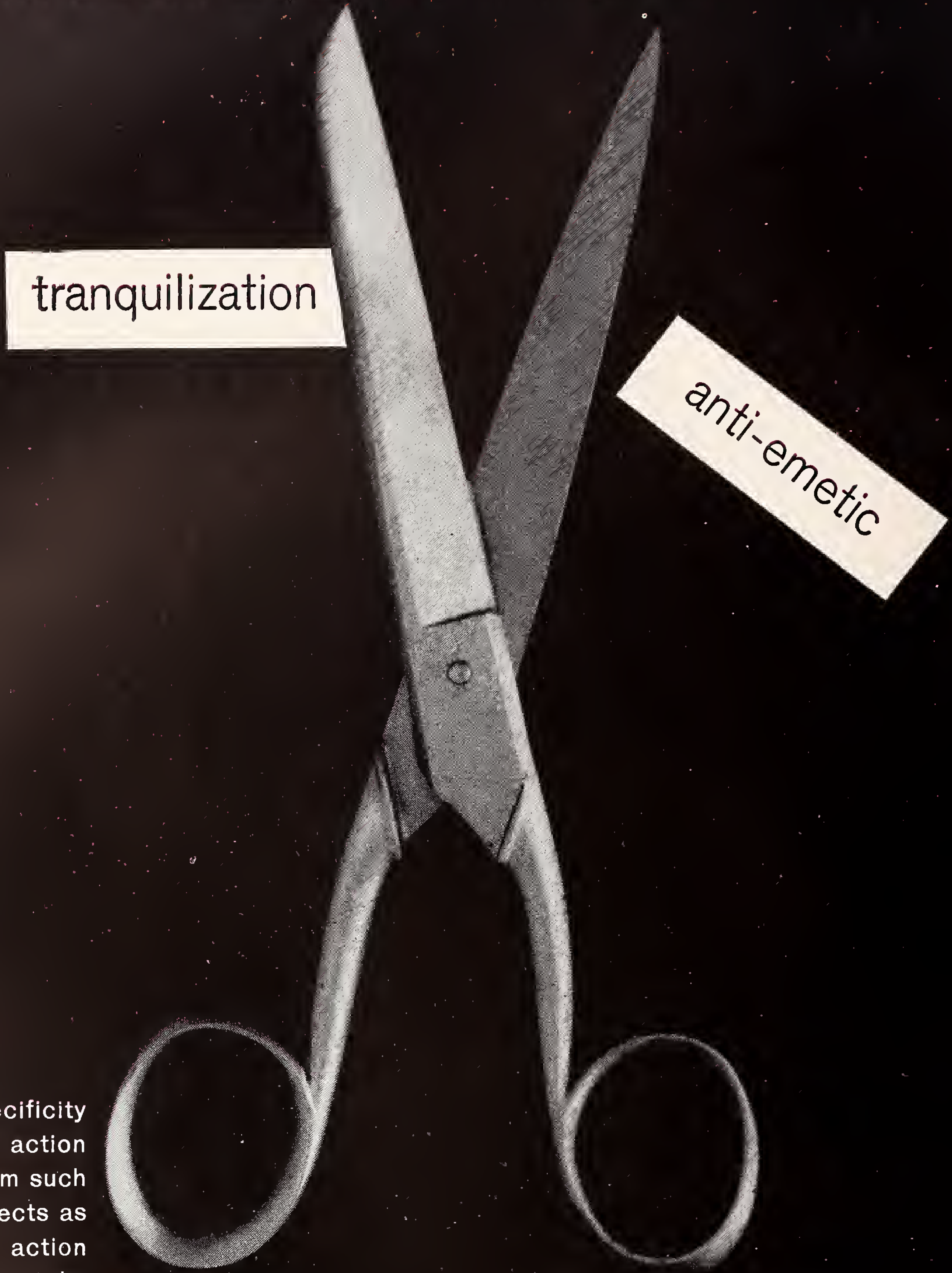
tastes good! Each daily cherry-flavored teaspoonful dose (5 cc.) contains:

l-Lysine HCl	300 mg.
Vitamin B_{12} Crystalline	25 mcgm.
Thiamine HCl (B_1)	10 mg.
Pyridoxine HCl (B_6)	5 mg.
Ferric Pyrophosphate (Soluble)	250 mg.
Iron (as Ferric Pyrophosphate)	30 mg.
Sorbitol	3.5 Gm.
Alcohol	0.75%

Bottles of 4 and 16 fl. oz.

Lederle LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

NOW... SAFER, EFFECTIVE TRANQUILIZER THERAPY



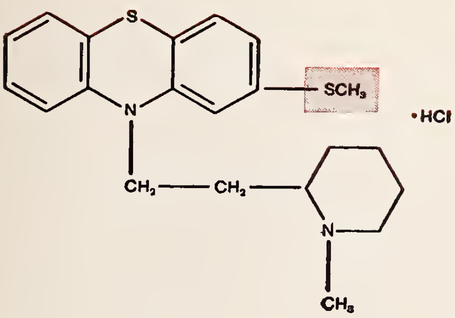
greater specificity
of tranquilizing action
—divorced from such
"diffuse" effects as
anti-emetic action
—explains why

Mellaril®
THIORIDAZINE HCl

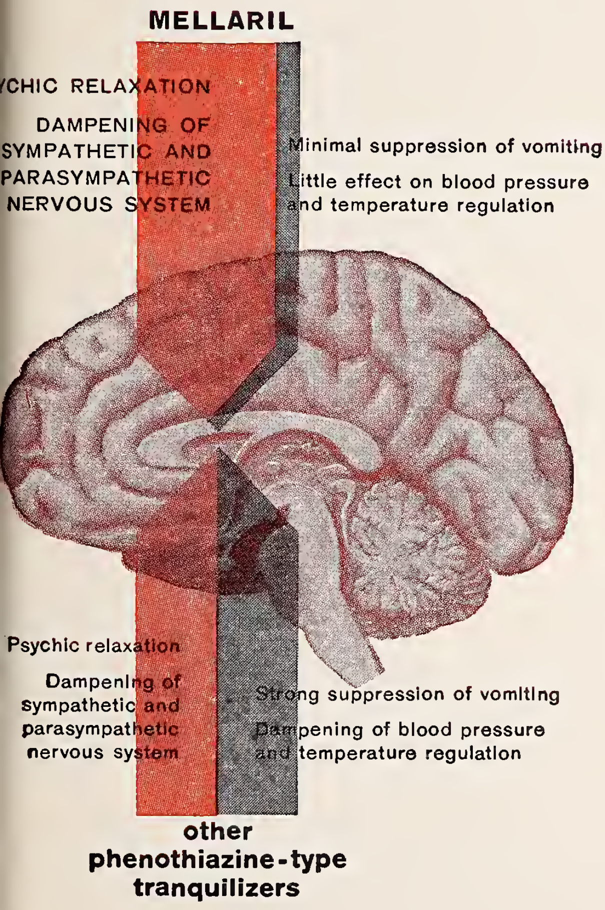
is virtually free of such toxic effects as · jaundice · Parkinsonism · blood dyscrasia

"Thioridazine [MELLARIL] is as effective as the best available phenothiazine, but with appreciably less toxic effects than those demonstrated with other phenothiazines.... This drug appears to represent a major addition to the safe and effective treatment of a wide range of psychological disturbances seen daily in the clinics or by the general practitioner."*

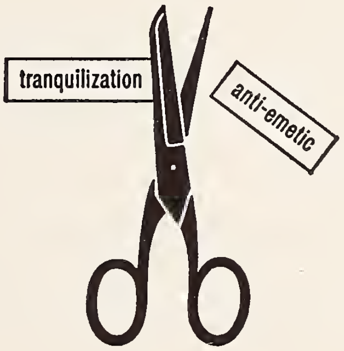
new advance in tranquilization:
reater specificity of tranquilizing action results in fewer side effects



The presence of a thiomethyl radical ($S\text{-}CH_3$) is unique in Mellaril and could be responsible for the relative absence of side effects and greater specificity of psychotherapeutic action. This is shown clinically by:


MELLARIL
CHIC RELAXATION
DAMPENING OF SYMPATHETIC AND PARASYMPATHETIC NERVOUS SYSTEM
Minimal suppression of vomiting
Little effect on blood pressure and temperature regulation
Psychic relaxation
Dampening of sympathetic and parasympathetic nervous system
Strong suppression of vomiting
Dampening of blood pressure and temperature regulation
other phenothiazine-type tranquilizers

1 A specificity of action on certain brain sites in contrast to the more generalized or "diffuse" action of other phenothiazines. This is evidenced by a lack of appreciable anti-emetic effect.



2 Less "spill-over" action to other brain areas — hence, absence of undue sedation, drowsiness or autonomic nervous system disturbances.

3 A notable absence of extrapyramidal stimulation.

4 Lack of impairment of patient's normal drive and energy.

5 Virtual freedom from such toxic effects as jaundice, photosensitivity, skin eruptions, blood forming disorders.

INDICATION	USUAL STARTING DOSE	TOTAL DAILY DOSAGE RANGE
ADULTS: Mental and Emotional Disturbances:		
MILD — where anxiety, apprehension and tension are present	10 mg. t.i.d.	20-60 mg.
MODERATE — where agitation exists in psychoneuroses, alcoholism, intractable pain, senility, etc.	25 mg. t.i.d.	50-200 mg.
SEVERE — in agitated psychotic states as schizophrenia, manic depressive, toxic psychoses, etc.:		
Ambulatory	100 mg. t.i.d.	200-400 mg.
Hospitalized	100 mg. t.i.d.	200-800 mg.
CHILDREN: BEHAVIOR PROBLEMS IN CHILDREN	10 mg. t.i.d.	20-40 mg.

LLARIL Tablets, 10 mg., 25 mg., 100 mg.

feld, A. M.: Scientific Exhibit, American Academy
General Practice, San Francisco, April 6-9, 1959

SANDOZ

control the tension—treat the trauma

...*Pathibamate*® *400* *200*

meprobamate with PATHILON® tridihexethyl chloride Lederle

greater flexibility in the control of tension, hypermotility and excessive secretion in gastrointestinal dysfunctions

PATHIBAMATE combines two highly effective and well-tolerated therapeutic agents:

meprobamate (400 mg. or 200 mg.) widely accepted tranquilizer and . . .
PATHILON (25 mg.)—anticholinergic noted for its peripheral, atropine-like action, with few side effects.

The clinical advantages of PATHIBAMATE have been confirmed by nearly two years' experience in the treatment of duodenal ulcer; gastric ulcer; intestinal colic; spastic and irritable colon; ileitis; esophageal spasm; anxiety neurosis with gastrointestinal symptoms and gastric hypermotility.

Because of individual variation in the intensity of stimuli in gastrointestinal disorders, adequate dosage for optimum control may be expected to vary as well. The dosage strengths of PATHIBAMATE-400 and PATHIBAMATE-200 facilitate individualization of treatment in respect to both the degree of tension and associated G.I. sequelae, as well as the response of different patients to the component drugs.

Supplied: PATHIBAMATE-400—Each tablet (yellow, 1/2-scored) contains meprobamate, 400 mg.; PATHILON tridihexethyl chloride, 25 mg.
PATHIBAMATE-200—Each tablet (yellow, coated) contains meprobamate, 200 mg.; PATHILON tridihexethyl chloride, 25 mg.

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PATHIBAMATE-200—1 or 2 tablets three times a day at mealtime and 2 tablets at bedtime.
Adjust to patient response.

Contraindications: glaucoma; pyloric obstruction, and obstruction of the urinary bladder neck.

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☞ **a universal record of effectiveness**
In anxiety, tension and agitation, ATARAX "... produced a more favorable state of calm and tranquility than any drug previously used."[1]

☞ **widest latitude of safety and flexibility**
No serious adverse reaction ever documented – five dosage forms and sizes

☞ **chemically distinct among tranquilizers**
Not a phenothiazine or a meprobamate

☞ **added frontiers of usefulness**
These unique benefits in specific indications

ANTIHISTAMINIC
ANTIARRHYTHMIC
ANTISECRETORY

BACKED BY A WORLD OF EXPERIENCE[7]

Dosage: ADULTS, one 25 mg. tablet, or one tbsp. Syrup q.i.d. CHILDREN – 3-6 years, one 10 mg. tablet or one tsp. Syrup t.i.d.; over 6 years, two 10 mg. tablets or two tsp. Syrup t.i.d.

Supplied: Tiny 10 mg., 25 mg., and 100 mg. tablets, bottles of 100. Syrup, pint bottles. Parenteral Solution, 10 cc. multiple-dose vials.

Referenecs: 1. Farah, L.: Internat. Rec. Med. *169*:379 (June) 1956. 2. Smigel, J. O., et al.: J. Am. Geriatrics Soc. *7*:61 (Jan.) 1959. 3. Feinberg, A. R., et al.: J. Allergy *29*:358 (July) 1958. 4. Eisenberg, B. C.: J.A.M.A. *169*:14 (Jan. 3) 1959. 5. Maryssael, L.: Bruxelles-méd. *38*:141 (Jan. 26) 1958. 6. Pfleger, R.: Med. Klin. *53*:1030 (June 5) 1958. 7. Over 200 laboratory and clinical papers from 14 countries.

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nd of hydroxyzine)

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Science for the World's Well-Being

“I feel tired even after a full night’s sleep.’

Restores normal vitality in

emotional fatigue

Deprol relieves undue tiredness, apathy and depressed moods as it calms anxiety – without the risk of liver damage or extrapyramidal symptoms frequently reported with energizers or phenothiazines.

Emotional or nervous fatigue—undue tiredness, apathy, lethargy and listlessness—cuts sharply into the patient's usual physical and mental productivity. It is one of the most common conditions seen in every medical practice. Untreated, emotional fatigue may mushroom into a depressive episode, anxiety state, chronic fatigue or a mixture of these disorders.

Deprol acts fast to relieve emotional fatigue. It overcomes tiredness and lethargy, apathy and listlessness, thus restoring normal vitality and interest before the fatigue deepens. On Deprol, improvement is achieved without producing liver toxicity, hypotension, psychotic reactions, changes in sexual function or Parkinson-like reactions associated with energizers or phenothiazines.

BIBLIOGRAPHY (10 clinical studies, 714 patients):

1. Alexander, L. (35 patients): Chemotherapy of depression—Use of meprobamate combined with benactyzine(2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. **2.** Bateman, J. C. and Carlton, H. N. (50 patients): Deprol as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy. In press, 1959. **3.** Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **4.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **5.** McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression—New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. **6.** Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. **7.** Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. **8.** Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression. M. Ann. District of Columbia 28:438, Aug. 1959. **9.** Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy. In press, 1959. **10.** Splitter, S. R. (84 patients): The care of the anxious and the depressed. Submitted for publication, 1959.

and

11. Laughlin, H. P.: The Neuroses in Clinical Practice, Saunders, Philadelphia, 1956, pp. 448-481.

▲Deprol▲®

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this may be gradually increased up to 3 tablets q.i.d.
Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.
Supplied: Bottles of 50 light-pink, scored tablets.

CD-463

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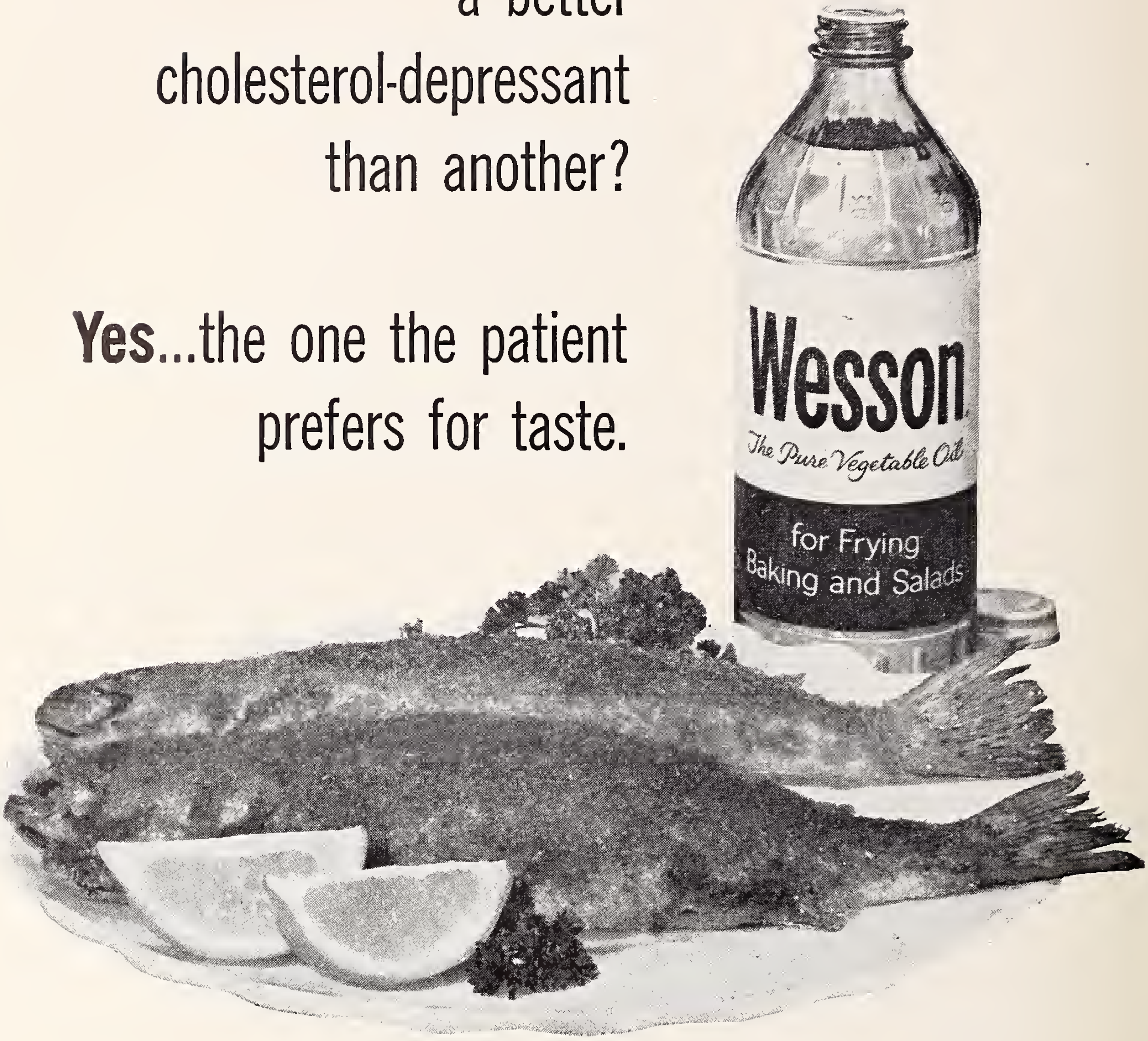
Is one vegetable oil a better cholesterol-depressant than another?

Yes...the one the patient prefers for taste.



No leading vegetable oil can claim superiority over Wesson in its serum cholesterol-depressant effect. As a diet must be eaten to be effective, *the preferred appetite appeal of Wesson* is most important. Through the years, Wesson has been consistently favored over the next selling oil, particularly for flavor (blandness), odor and lightness of color*. Wesson *encourages* the patient to stay on the prescribed diet.

Quality and uniformity you can depend on. Wesson has a poly-unsaturated content better than 50%. Only the lightest cottonseed oils of the highest iodine number are selected for Wesson and no significant variations in standards are permitted in the 22 exacting specifications required before bottling.

Each pint of Wesson contains 437-524 Int. Units of Vitamin E.

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Never hydrogenated—completely salt free

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Tetracycline-Triple Sulfa Combination (TETREX® c̄ T/S) in the Treatment of INFECTION

It is generally agreed that it is ideal to withhold antibiotic and chemotherapeutic drugs until after sensitivity tests show which antibacterial agent will be most effective. But very often, in actual practice, the physician knows that delay in starting antibacterial treatment may be detrimental to the welfare of his patient. He must then select the therapy to meet the most serious and immediate threats to the patient.

Why Combination Therapy?

Certain infections do not respond as well to a single agent as to a combination. *Hemophilus influenzae* infections, which are frequent in children, are a particularly serious threat to infants and children up to about 3 or 4 years of age since they have not yet built up any appreciable immunity. Serious complications such as influenzal pneumonia, empyema, or meningitis may develop, especially in this age group. In fact, except for those periods when meningococcal meningitis is epidemic, *H. influenzae* is the most frequent cause of meningitis.[1] This gram-negative organism is highly susceptible both to the tetracyclines and to the sulfonamides. Even in severe infections, therapeutic failure can be virtually eliminated by giving sulfonamides plus tetracycline.[1] These two agents together constitute the treatment of choice, and give better results than either alone.[2]

Sulfonamides remain the drugs of choice for all meningococcal infections, including meningitis. They readily penetrate the blood-brain barrier and pass into the cerebrospinal fluid in good concentrations.[3] In treating overwhelming meningococcal infections, and complicating infections of the upper respiratory tract caused by other organisms, the addition of tetracycline to sulfas can be valuable.[4]

In recent years the sulfonamides have again been prescribed more and more frequently. In certain serious infections, better results can be obtained with a combination of antibiotic and sulfonamide than with either drug alone (e.g., severe pneumococcal pneumonia or pneumococcal meningitis[5]). Furthermore, mixed infections, to which young children are particularly susceptible, often respond only to combination therapy such as tetracycline with sulfonamides (TETREX c̄ T/S).

Why Triple Sulfas?

Some sulfonamides, though therapeutically useful, frequently crystallize and cause renal damage. Sulfonamide mixtures are designed to prevent this effect. It is known that different substances can coexist in solution without interfering with each other's solubility. In such a solution each component behaves as if it alone were present. Thus, a much larger total amount of sulfonamide can exist in the urine without precipitating if a mixture is administered than if the same amount of only one compound is given.

Similarly, there is less danger of hypersensitivity with mixtures. The incidence of sensitization varies directly with the dosage and is limited to the particular sulfa given. Simultaneous use of several sulfa compounds, each in partial dosage, tends to keep each drug below its own sensitization level.[3] As with all sulfonamides, it is advisable to check for possible blood dyscrasias, rash, or renal toxicity during extended administration.

TETREX c̄ T/S, by combining only 167 mg. each of sulfadiazine, sulfamerazine, and sulfamethazine, practically eliminates serious renal damage and sensitization reactions due to sulfonamides while retaining the therapeutic efficacy of the total dose.

TETREX c̄ T/S can be administered with confidence in all severe and mixed infections due to tetracycline-sensitive and sulfonamide-sensitive organisms, including infections of the upper respiratory, urinary, and gastrointestinal tracts.

References: 1. Alexander, H. E.: The hemophilus group. In: Dubois, R. J.: Bacterial and Mycotic Infections of Man. Ed. 3, Philadelphia, J. B. Lippincott Co., 1958, p. 470ff. 2. Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics. Ed. 2, New York, The Macmillan Co., 1956, pp. 1322-1323. 3. Beckman, H.: Drugs — Their Nature, Action, and Use. Philadelphia, W. B. Saunders Co., 1958, pp. 527-528. 4. Dingle, J. H.: Meningococcal infections. In: Cecil, R. L., and Loeb, R. F.: A Textbook of Medicine. Ed. 9, Philadelphia, W. B. Saunders Co., 1955, p. 196ff. 5. Goodman, L. S., and Gilman, A.: The Pharmacological Basis of Therapeutics. Ed. 2, New York, The Macmillan Co., 1956, p. 1308.

TETREX® c̄ T/S

Antibiotic-triple sulfa combination in a palatable, cherry-flavored syrup.

Each 5 ml. teaspoonful contains:

Tetracycline (ammonium polyphosphate buffered equivalent to tetracycline HCl activity)	125 mg.
Sulfadiazine	167 mg.
Sulfamerazine	167 mg.
Sulfamethazine	167 mg.

This suspension may be stored at normal room temperature.

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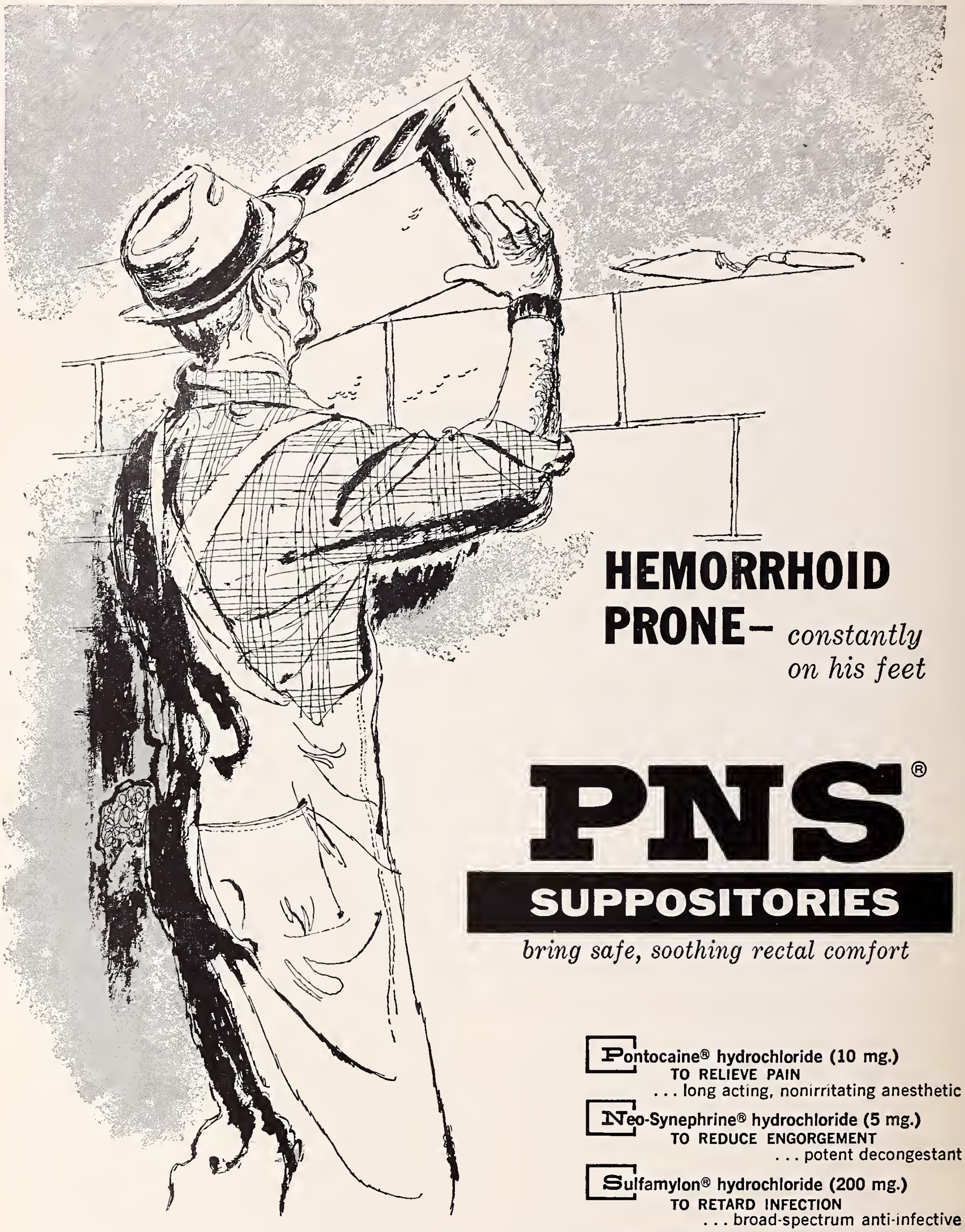

HEMORRHOID PRONE– *constantly on his feet*

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bring safe, soothing rectal comfort

Pontocaine® hydrochloride (10 mg.)
TO RELIEVE PAIN
. . . long acting, nonirritating anesthetic

Neo-Synephrine® hydrochloride (5 mg.)
TO REDUCE ENGORGEMENT
. . . potent decongestant

Sulfamylon® hydrochloride (200 mg.)
TO RETARD INFECTION
. . . broad-spectrum anti-infective

with bismuth subgallate and balsam of Peru

Directions:
1 suppository rectally after each bowel movement and on retiring.

How Supplied:
Boxes of 12.

As an added measure to promote rectal comfort while correcting bowel atonicity, add MUCILOSE®-SUPER to the patient's diet. This lubricating, nonirritating bulk laxative and stool softener will encourage easy, regular evacuation.

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VISTARIL®
hydroxyzine pamoate

takes him off
the tension treadmill

By restoring tranquility, VISTARIL rapidly helps to relieve functional pain and discomfort in many gastrointestinal disorders. Clinicians find that patients on VISTARIL more willingly accept their condition and adhere better to their regimen.

VISTARIL has an outstanding record of safety and is valuable adjunctive therapy in home or hospital when administered to patients with peptic ulcer, gastroenteritis, esophageal spasm, and nervous dyspepsia.

A Professional Information Booklet is available from the Medical Department on request.

Supply: Capsules—25, 50 and 100 mg.; Parenteral Solution—10 cc. vials and 2 cc. Steraject® Cartridges, each cc. containing 25 mg. hydroxyzine HCl.

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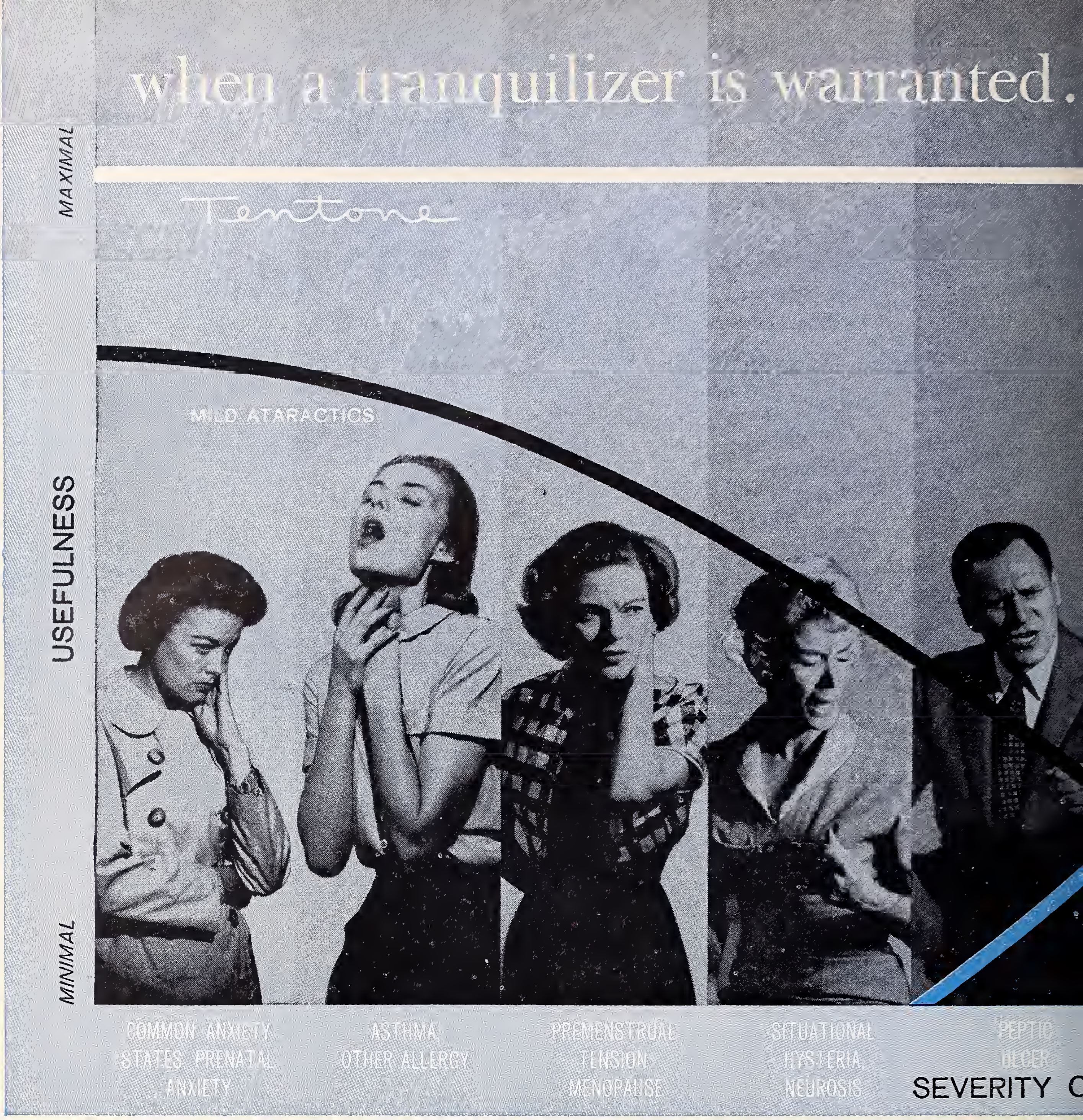

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TENTONE® Methoxypromazine Maleate is a new, distinctive phenothiazine... highly active ...for general use in mild and moderate emotional and psychosomatic disorders.

TENTONE elicits a striking, positive calming response[1,2]... with marked reduction of psychic disorientation, and low risk of blood, liver or other organic toxicity and intolerance.[1-4]

TENTONE parallels the weaker ataractics in low incidence of side effects. Freedom from induced depression is apparently even greater.[5]

TENTONE provides a broadly adaptable dosage range (30 to 500 mg. daily) to permit maximum control in cases of varying severity.

TENTONE is also indicated to relieve emotional stress in surgical, obstetric and other hospitalized patients.

osage: *Mild to moderate cases*—average starting dose, one 10 mg. or one 25 mg. tablet hree or four times daily. *Moderate to severe*—average starting dose, one 50 mg. tablet our times daily. *Supplied:* 10 mg., 25 mg., and 50 mg. tablets.

. Bodi, T., and Levy, H.: Clinical report. cited with permission. 2. Wetzler, R. A., and Phillips, R. M.: Clinical eport, cited with permission. 3. Prigot, A.: Clinical report. cited with permission. 4. Gosline, E., *et al.*: *Am. J. Psychiat.* 15:939 (April) 1959. 5. Turvey, S. E. C.: Clinical report. cited with permission.

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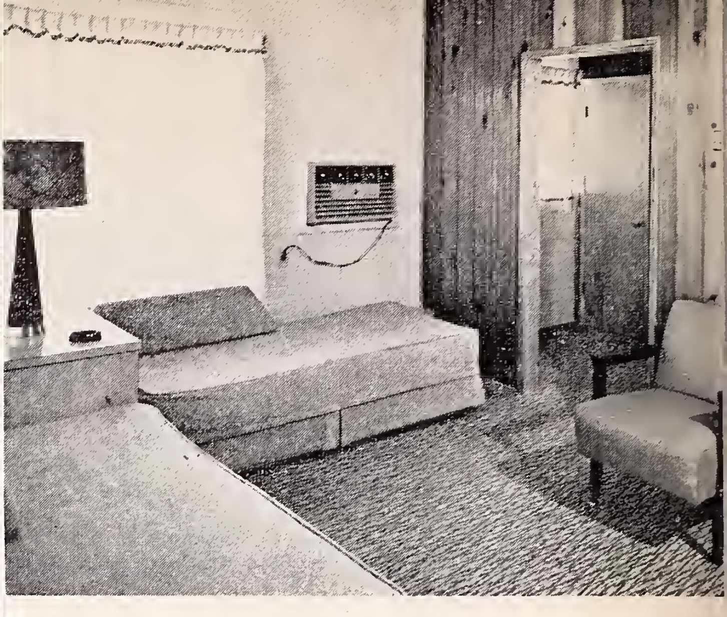

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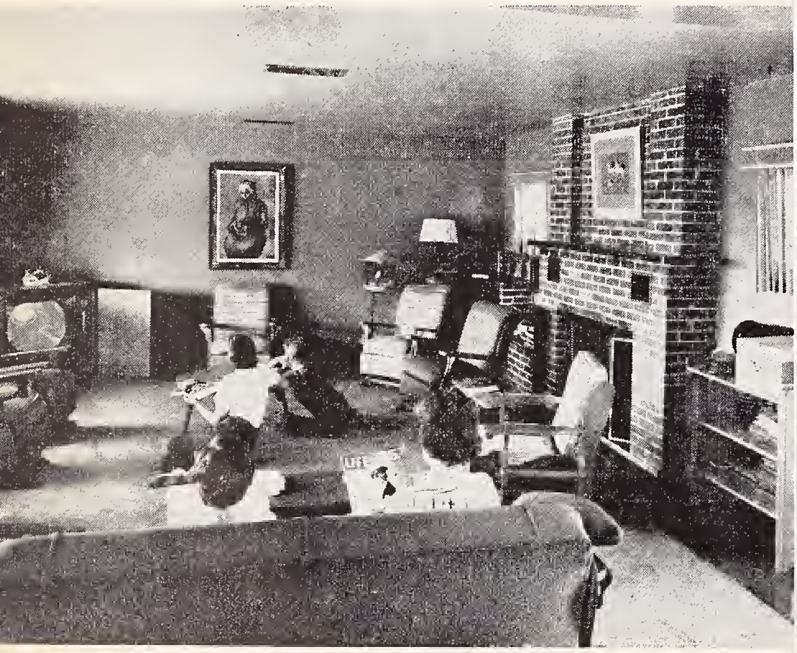

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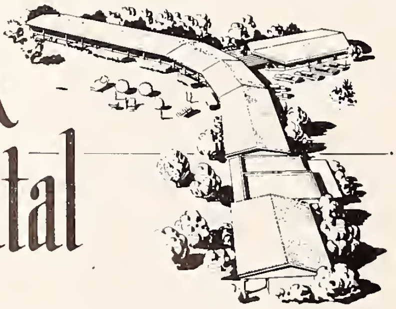

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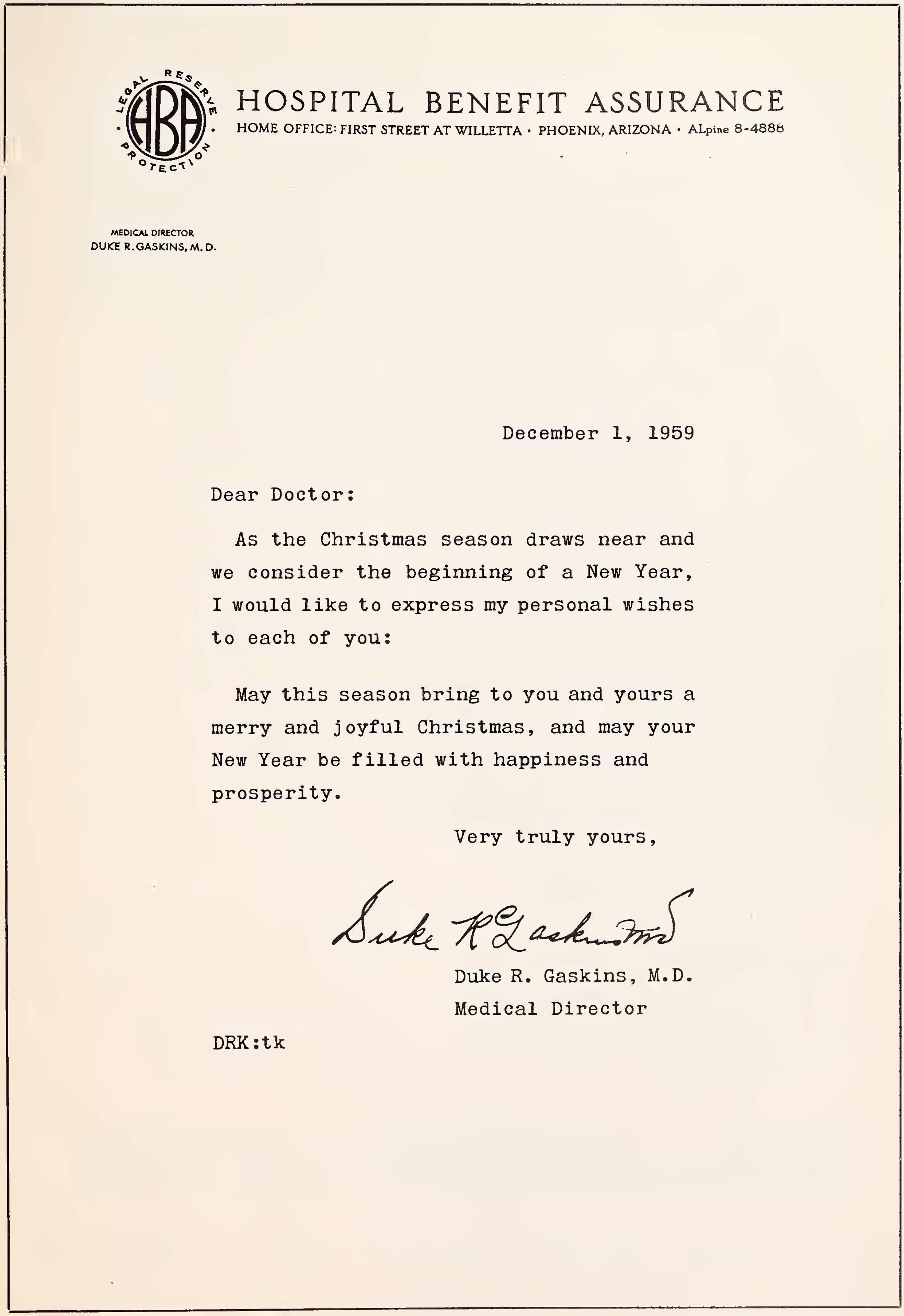

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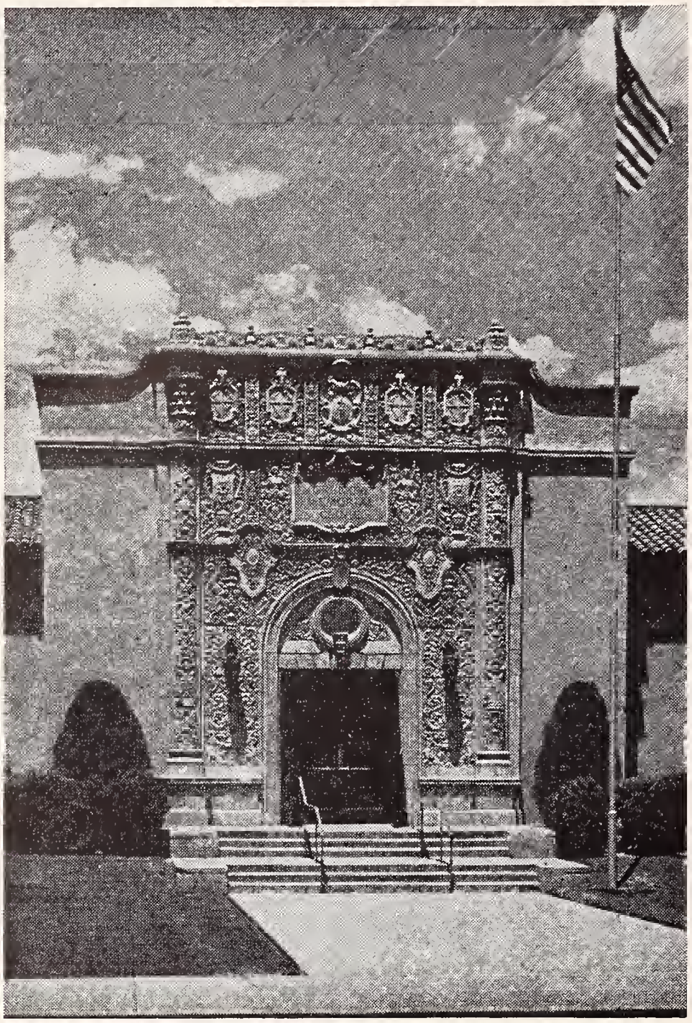

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